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# CONTENTS.

VOLUME V.—SIXTH SERIES. 1930-1931.

	PAGE
I. Council and Officers of the Society .. .. .	1
II. Agricultural Notes on the Southern District of Buenos Aires ..	7
By <b>Major J. H. Norton.</b>	
III. Sporting Rights .. .. .	17
By <b>The Hon. D. Meston.</b>	
IV. The Sugar Beet Crop .. .. .	24
By <b>J. K. Thompson, N.O.A.</b>	
V. Seale-Hayne Agricultural College .. .. .	59
By <b>D. R. Edwardes-Ker, O.B.E., M.A., B.Sc.</b>	
VI. The Open Tank Process for Antiseptic Treatment of Timber ..	65
By <b>J. Bryan, A.M.I.C.E.</b>	
VII. Report of Experiments on the Eradication of Bracken ...	70
By <b>T. Wallace and A. W. Ling.</b>	
VIII. The Society's Exhibition at Torquay .. .. .	92
By <b>F. H. Storr.</b>	

# CONTENTS—*Continued.*

	PAGE
IX. The Society's Dairy Department at Torquay .. .. .	99
By <b>A. F. Somerville.</b>	
X. Agricultural Education and Research at Torquay .. .. .	110
By <b>H. M. Cundall, I.S.O., F.S.A., and A. L. Hobhouse.</b>	
XI. The Forestry Department at Torquay .. .. .	115
By <b>The Hon. J. W. Best, O.B.E.</b>	
XII. The Exhibition of Cider at Torquay .. .. .	118
By <b>Major E. W. Farwell.</b>	
XIII. Annual Report on the Society's General Operations .. .. .	121
By <b>F. H. Storr.</b>	
XIV. Annual Report of the Consulting Chemist for 1930 .. .. .	126
By <b>Dr. J. A. Voelcker, C.I.E., M.A.</b>	
XV. The National Fruit and Cider Institute—	
Introduction .. .. .	128
By <b>B. T. P. Barker.</b>	
Advisory Work .. .. .	133
Spraying Trials against Apple and Pear Scab at Long Ashton.	
III. Season 1930 .. .. .	143
By <b>B. W. Marsh.</b>	

CONTENTS—*Continued.*

	PAGE
Progress Report on Vegetable Diseases .. .. .	154
By <b>Lawrence Ogilvie and B. O. Mulligan.</b>	
Notes on Some Agricultural and Horticultural Pests in the Bristol Province .. .. .	174
By <b>L. N. Staniland and C. L. Walton.</b>	
A Note on the Control of Woolly Aphis on Dormant Nursery Stock	181
By <b>L. N. Staniland and C. L. Walton.</b>	
Cider Making Trials for Season 1929-1930 .. .. .	183
By <b>O. Grove.</b>	
The Production of Cricket Bat Timber .. .. .	200
By <b>H. P. Hutchinson.</b>	

# CONTENTS—Continued.

## APPENDIX.

### TORQUAY MEETING, 1930.

	PAGE
Judges .. .. .	i
Awards .. .. .	iv

---

Objects of the Society and Privileges of Membership .. .. .	cx i
List of of Annual Exhibitions .. .. .	cxvi
Analyses : Members' Privileges .. .. .	cxix

### BRISTOL MEETING, 1931.

---

Donors of Money Prizes, etc. .. .. .	cx xiii
Prizes for Stock, Produce, etc. .. .. .	cx xv
„ „ Poultry .. .. .	cxlviii
Conditions and Regulations .. .. .	cli

## FINANCE.

---

Summary of Cash Account to December 31st, 1930 .. .. .	clxiv
Annual Cash Account .. .. .	clxvi
Assets and Liabilities .. .. .	clxxvi
Financial Result of Torquay Show .. .. .	clxxvii

---

List of Members .. .. .	clxxviii
Index .. .. .	ccix

# CONTENTS—Continued.

## ILLUSTRATIONS.

	PAGE
<i>Agriculture at Buenos Aires</i> .. .. .	16
<i>" A Rodeo."</i>	
<i>Draught Horses.</i>	
<i>Seale-Hayne College</i> .. .. .	64
<i>The South Front.</i>	
<i>The Quadrangle.</i>	
<i>The Dining Hall.</i>	
<i>Students. Prize Winners at the Bath and West Show, 1930</i>	
<i>Foreman III. 1st in Milking Trials and Reserve Champion</i> <i>1928 Dairy Show.</i>	
<i>South Devon Prize Winning Lambs.</i>	
<i>Open Tank Process for Antiseptic Treatment of Timber for Estates, Farms,</i> <i>Collieries, etc.</i> .. .. .	68
<i>Fig. I. Curve Shewing Absorption of Creosote.</i>	
<i>Fig. II. Planks Shewing Absorption of Creosote.</i>	
<i>Figs. III, IV and V. Creosoting Posts.</i>	
<i>Agricultural and Horticultural Pests in the Bristol Province—</i>	
<i>The Beet Carrion Beetle (Blitophaga Opaca) and its Control</i> ..	176
<i>Sainfoin Plants showing injury by C. onobrychidis</i> .. ..	178



" He that goes about to forward agricultural improvement must begin by finding out the true reason of what is called routine, or 'the custom of the country.' It sometimes happens that these reasons are only accidental, and then you may dismiss them fearlessly ; but often it turns out that every-day practice rests on a solid foundation of facts ; and then if you make an onslaught on local prejudices, they will be sure to beat you."

" The true course of the agricultural improver is, to take one step at a time, to gain a clear insight into facts by experience, not to try to go too fast, and to trust to the work of time."

" If practice which sets up to do without theory is contemptible, theory without practice is foolhardy and perfectly useless."—*From the Rural Economy of England, Scotland and Ireland*, by LEONCE DE LAVERGNE

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## Original Articles and Reports.

### II.—SOME AGRICULTURAL NOTES ON THE SOUTHERN DISTRICT OF BUENOS AIRES.

*By Major J. H. Norton.*

Until the middle of the last century the Southern Districts of the Province of Buenos Aires in the Argentine Republic had been since time immemorial the undisturbed and happy hunting grounds of the Indian Aborigines. These immense plains, which extend like an ocean of grass from the shores of the South Atlantic to the foothills of the Andes, and from Patagonia to the banks of the great River Plate, gave pasturage to the guanaco (a near relation of the llama), the deer, the South American ostrich, and the lesser animals which the Indians hunted for a living.

Up to the date of the Spanish discovery of the River Plate in the 16th Century, horses and cattle were unknown, and the Indian hunted on foot, using his spear and his "bolas," the former stone tipped, the latter made from raw hide and rounded stones. The Spanish settlers brought with them their horses and their cattle. Animals strayed, and in the course of time herds of wild horses spread far and wide over the plains. These the Indians turned to account; learning to ride they soon came to live almost entirely on horseback, hunting the deer, guanaco, and ostrich with greater success, and acquiring for their raids against the hated foreign invader an invaluable accession of mobility.

Settlement by Europeans was at first confined to districts accessible by water, such as are the banks of the River Plate, its tributaries, and certain coastal regions. Gradually, however, the Indians were driven further and further into the interior, and by the eighties of the last century were almost exterminated. A few survivors lingered in the less accessible districts and took occasional revenge upon the more venturesome of the white pioneers. Finally the whole of the plains or Pampas (known to Argentines as "Campo," meaning "Country" as opposed to "town," and always spoken of by English settlers as "the Camp") became available for settle-



ment, and by degrees passed from government to private ownership. In some cases considerable areas were given to officers of the Argentine Army who had earned reward in the Indian wars; in others land was bought for very small sums by speculators who resold at a profit to intending settlers. The price paid to the government was about £400 per square league of land, which at the present day is worth about a hundred times as much.

In the district best known to the writer, the land was all actually in private ownership by the early seventies, though the greater part remained unsettled, unfenced, and unstocked. Railways had extended in a direction southerly from Buenos Aires, and trains ran for some one hundred and fifty miles into this great natural grazing ground. It was at this stage that settlement began in earnest. The owners of the newly acquired land brought stock from districts already settled, and fenced in their properties. In this district there is no natural timber and all posts for fencing were obtained from the forests of the North. A hard and very durable wood known as "Nandubay" was chiefly used, and many of the first posts to be imported are still as sound as ever after the lapse of fifty or sixty years.

Labour was—and is—represented by "Gauchos" (Cow-boys), men usually of Spanish extraction, but having in their veins in most cases a certain admixture of Indian blood. These men are born to the saddle and are very fine horsemen. Generally speaking they are sufficiently hard working. It must be admitted, however, that though good tempered they are also extremely quick tempered, and will use knife or pistol to decide a quarrel where the Englishman would have recourse to his fists. There is no capital punishment in the Argentine Republic. Fatal endings to disputes are frequent, and if captured by the police, the victor usually passes but a few weeks or months in gaol.

The Argentine cow-ponies are, or were at the time of the South African war, well known to many Englishmen, and did not then earn a very good reputation. In their own country they are entirely adequate. The sudden change to hard work on an unfamiliar diet may account to some extent for their failure to earn popularity in Africa. It may be added that buying was not always entirely judicious. At home, grass fed and unshod, they are enduring, intelligent, and possessed of very comfortable paces, while of recent years the inveterate tendency to buck under the stimulus of excitement, fear or surprise, seems to have diminished.

They come originally of Barb Stock and show certain marked characteristics of that breed. Mares had no value in earlier days except for breeding, for their hides, or for horsehair which was cut periodically from manes and tails. They were never ridden and are rarely so to-day.

The importation of English thoroughbred and Clydesdale stallions has modified the breed, resulting in improvement in quality in the riding horse, and in weight in the draught animal, that is to say where breeding has been carried out judiciously. Unfortunately many ponies used for riding purposes show Clydesdale blood, to the detriment of appearance and performance. In the early eighties a riding horse was worth about fourteen dollars, a mare two to three dollars; representing at the then value of the dollar about £2 16s. and 12s. respectively.

Before English stock was imported the cattle of the country were long horned, hardy and lean. They provided jerked beef, tallow and hides. No live animals were exported, and frozen or chilled beef was unknown. The first shorthorn bull was imported in 1848 by Mr. John Miller, and this breed has proved itself to be eminently suitable to local climate and conditions, under which it has thriven. Since then there has been a steady and progressive improvement in quality. It is rare nowadays to see cattle showing "Criollo" or native characteristics, and stock is usually of almost pure Short-horn, Hereford, or Aberdeen Angus descent.

Different breeds suit different districts, but the most universally popular is the Shorthorn. In the past much pedigree stock has been imported. Nowadays so much stock of very good class is bred in the country, that the demand is for the importation of the very best animals only, so that blood may be changed in the native bred herds. Stock imported from England or elsewhere has to pass veterinary examination on landing and to undergo a period of about a month in quarantine, during which tests for tuberculosis are carried out. If an animal fails to pass veterinary examination and has to be destroyed the loss falls upon the owner, whether he be a shipper who has sent stock for sale in Buenos Aires, or a local breeder who has purchased stock in England or elsewhere abroad. It is of course usual to insure against such losses. It may be added that both dipping and handcuring are regularly carried out on all estancias as a preventive of scab.

Frozen meat was first shipped to Europe in 1877 in the French

ship "Frigorifique." To-day there is an immense and increasing trade in chilled and frozen beef. Animals are usually delivered by rail direct to the Freezing Companies and are paid for by live weight at an average rate of about 30 cents per kilogramme, or say, 3d. per pound. The demand for chilled and frozen meat is unlikely to decline, as, apart from European markets, the United States, which until comparatively recently was able to export meat, has now ceased to produce even enough for its own needs and is compelled to import. Its markets have not yet been opened to Argentine meat, but are likely to be so ere long.

The sheep first imported by Spanish settlers some three centuries ago were of Merino type. In the course of years their characteristics became modified under an altered environment. The animal grew tall and lean, yielding dry tough meat, and wool which more resembled hair. It was therefore of little value for either carcase or wool. What was lost in quality was gained in hardness, but modern requirements have led to the almost total extinction of this type. Lincoln, Rambouillet (French Merino) and Romney Marsh sheep have taken their place, and have proved to be the breeds best suited to local conditions. Wool is sold in Buenos Aires, or shipped to the markets in London, Liverpool, Antwerp, etc.; the carcasses are transported frozen to Europe as in the case of those of cattle, and are paid for in the same manner, though prices paid for mutton are rather less than for beef.

In the Southern districts good Lincoln sheep are the most popular, preferably crossed with animals of the New Zealand type, as the latter carry a finer fleece than the English variety, though the carcase is rather smaller. Romney Marsh rams are often used and the wool is then rather more valuable in the market, but yields less per fleece. The Rambouillet produces fine wool but a poor carcase.

Rams are usually put to the ewes about the month of February. Lambing percentages rarely reach 100%, and a final result of 65% after lambs are weaned would be good. With better management, however, mortality amongst lambs is decreasing.

The Pampas in their natural condition, are covered with coarse hard grasses growing in tussocks usually about three feet in height. These grasses when mature are too coarse for consumption by stock, but when young and especially when springing after a prairie fire, they are readily eaten. On low ground beside the small streams which here and there meander sluggishly across the plains

or round lagoons, a much shorter and closer growing grass is found. In early days, before the plough was used, low lying ground of this description was highly valued. The Pampas grass also, which in a more or less degenerate state is often seen in English gardens, flourishes in low lying tracts of country. It has no feeding value but does afford some shelter to animals in bad weather. In the early autumn when the grass is in flower the masses of beautiful plumes often covering hundreds of acres, and of every delicate shade of pink, pale green, and white, are a wonderful sight. Before the days of agriculture the Pampas had a very great charm, and much natural beauty, derived from the seas of waving grasses, the wide horizon, and the skies. These, in the region of these great plains of the South, display wonderful effects at sunrise and sunset, and go far to compensate for the monotony of an endless and almost featureless expanse of grass. Little land has now escaped the plough, and with the multiplication of fences, wind pumps, and plantations much of the old charm of the Camp has vanished.

Agriculture partly owed its introduction to a rather curious episode. In the later years of the 18th century certain districts of Germany which lay upon the Russian border, were inhabited by communities of Mennonites, whose religious tenets forbade them to undertake military service. These men were expert wheat farmers. When conscription for military service was instituted in Germany these Mennonites found themselves faced with the alternatives of disobedience to the laws of their church or of their country. The Empress Catherine of Russia, who wished that the peasants on the Russian side of the border should learn improved methods of wheat growing, seized this opportunity of attracting settlers who could give the necessary instruction and example. She offered asylum to such Mennonites as chose to avail themselves of the opportunity on the terms that they should be exempted for a hundred years from the conscription which was in force in Russia also. At the end of that period their descendents were to have the choice of accepting liability to military service, or, as an alternative, to be given a free passage abroad.

When the hundred years came to an end great numbers of Mennonites, preferring to seek their fortunes in a new land, emigrated to the American continent, both North and South, where they followed their ancient occupation of wheat growing. Some were successful, and these for the most part settled permanently in the districts to which they originally migrated. A

great many, however, were less successful, and the general tendency was for a steady southward drift of wheat farmers seeking ideal conditions for their craft. Great numbers settled in the Argentine Republic and in the nineties of last century some of them reached the district which is the subject of this article. Here they rented land from the owners of Estancias, and usually held their farms for terms of three years, after which they moved to fresh ground, either on the same Estancia or elsewhere.

The advantage to the owner of the land was that, in addition to receiving rent, which was often paid in kind, his land was ploughed and the coarse grasses were killed for the time being. After the third harvest the land reverted to him in clean condition and thickly covered with self-sown wheat, for in this dry climate a great deal of grain falls before it is harvested. This green wheat provided excellent feed for stock in the autumn and winter following, and in most cases the tenants were under contract to sow fine grasses with the wheat in their last season. The ground was then left as a new layer of far greater feeding value than the natural camp.

These settlers have thriven, and many of them now own land and are well to do. They mix little with the natives of the country, but usually live in regular communities, with their own villages, churches, bakeries, etc.; speaking their own tongue amongst themselves and preserving their own customs. From them the Estanciero learned to grow wheat, oats, barley, maize, etc., and agriculture became a rival to the pastoral industry.

Harvesting machines are of course used universally, and are usually drawn by horses, though tractors are becoming common. In the Southern districts the machine most favoured is the combined header and thresher, in other districts the reaper and binder is still often used, as is also the old-fashioned header, which works accompanied by a cart into which the ears are delivered. The straw remaining on the land is ploughed in, or may be burned, if some such reason as a plague of grasshoppers or of weeds renders it desirable. Oats are generally harvested with a reaper and binder, as the straw is of value for feeding purposes. Agricultural machinery is practically all manufactured in U.S.A. or Canada. Soft English wheats are not suitable to Argentine conditions, and only the heavier varieties are used.

Alfalfa or lucerne has been grown successfully for many years in the western Camps of the Province of Buenos Aires, where the

soil, sometimes of a sandy nature, is much deeper than in the South. This herb, furnishing as it does the best possible grazing for cattle, and possessing great lasting qualities, enabled the land owners in that district to carry a much larger head of cattle to the league than was possible on natural camp. For many years residents in the South looked with envy upon the Alfalfa districts, for it was considered impossible to grow it satisfactorily upon their own land, which has the disadvantage that, at varying depths but never far below the surface, there is a stratum composed of hard chalky stone. This, however, has been proved of recent years to be a mistake, and very large areas are now sown with alfalfa. This is usually carried out in September and October. The seed is sometimes sown alone without any covering crop but more often with maize or linseed—or even when the young maize is just out of the ground.

Land which has been left unploughed for many years seems to be too strong for the young alfalfa plant and also more infested with such pests as wire worm which destroy the young plant before the root has reached a safe depth. When alfalfa is sown after a grain crop in the preceding year, the land is ploughed twice and harrowed, a corrugated roller is passed over it, and the seed is then sown broadcast by a machine. Finally light chain or brushwood harrows sweep the seed into the small furrows left by the roller and cover it. About twenty kilogrammes of seed are sown to the hectare or say 8lbs. per acre.

It is true that in this district, for the reasons given above, it does not last for as many years without re-sowing as is the case in the North-West, but it does nevertheless provide grazing of high value. The cultivation of cereals and the sowing of fine grasses and feeding crops has now reached a stage when there is actually a larger area under cultivation than that which remains under the natural hard grasses of the country. It is probably inevitable that herbage alien to the soil should be less resistant to attack by insect pests and by drought than the indigenous varieties. Alfalfa is particularly susceptible to the attentions of the latest, and one of the most serious, of the many plagues which appear from time to time. This is the "tucura," a grasshopper, or small locust, to which further reference will be made later.

The intensification of cultivation and of the sowing of grasses and herbs has been accompanied by a progressive sub-division of the Estancias by fencing. Whereas some thirty years ago paddocks were often of an area of a square league, they are now usually sub-

divided into numerous smaller enclosures, and one may speculate as to whether in another few decades enclosures will approximate to the size of those on farms in highly cultivated countries like our own, with the consequent gain in facility for refinement, and a larger carrying capacity of stock to a given area.

Unimproved or "natural" Camp would carry about one beast to five acres, refined camp about twice that number. Ranching must then inevitably develop into farming if the present rate of progress is maintained and with that change the last of the old ways will disappear and the picturesque horseman of the plains will give place to the foot labourer. One is reminded of Paterson's lines :

" And sour faced boundary riders creep  
On mongrel horses after sheep.  
O'er ranges where at racing speed  
Old Kiley used to wheel the lead  
On Kiley's Run.

Already there is a marked falling off in skill in the use of the lasso. Tramps, harvesters, and seekers of work are met trudging across the plains on foot, whereas it is a literal fact that thirty years ago the beggars went on horseback.

Stock has improved greatly in quality and increased in value, and the old rough methods of working half wild cattle have given way to the more practical if less romantic use of running pens. The animals themselves through confinement in smaller areas, and more regular association with mankind—and doubtless also because of the ever-increasing predominance of European blood—are much tamer than of old. Thirty years ago it was inadvisable to dismount within a hundred yards of a "rodeo" or round up of cattle; it can be done in safety to-day.

Civilisation is having its inevitable effect upon the fauna of the country. In the earlier days, before the Camp became comparatively thickly populated, wild animals were plentiful, though few in species as compared with the fauna of South Africa. The ruminants were represented by a small deer, and by the guanaco, a near relation of the llama of Peru, and a distant one of the camel. Both are practically extinct now, though in a certain range of barren rocky hills, which unexpectedly break the monotony of the Pampas, a very few of the latter still survive all but unknown. With the extinction of their natural prey the two big cats, the jaguar and the puma, have also disappeared, though again in the range of hills

just referred to, enough of the latter remain to make it worth the while of one local land owner, at least, to keep a "leonero" or "lion-killer."

The South American ostrich, or rhea, a smaller cousin of the African variety, is plentiful. Originally found in great numbers, these birds went through a period when there was a risk of their extinction. The increase in population and of fencing resulted in a great reduction in their numbers. There is no sport more beloved of the gaucho than running ostriches on horseback, and catching them with the "bolas." However, as the sport of running ostriches led to cutting of fences, and the wearing out of horses required for work, it was not favourably viewed by Estancia owners, who discourage it, and now these curious birds may constantly be seen stalking across the plains; often magnified by mirage into a semblance of the still greater, but quite extinct, wingless birds which once roamed the antipodes and Madagascar. The ostrich has practically no commercial value, though cheap dusting brushes are made from his wing feathers. Smaller animals have shared the fate of the jaguar and puma.

The pretty and curious Patagonian "hare" (which is not really a hare at all) has vanished, but has been replaced by the European hare, which imported, has thriven and multiplied and has become a plague in certain districts. The nutria—a giant water rat—whose fur is so well known, has suffered the inevitable fate of the unprotected fur-bearing animal. The skunk, "unwept, unhonoured, and unsung," is fast disappearing, as are his cousins of the weasel tribe, and the two species of wild cat which were once fairly common. Prehensile tailed opossums still take toll of the poultry yard, but are rarely seen. The vizcacha, a very extraordinary looking rodent of the size of a small dog, still resists extermination, he lives in great burrows and is entirely nocturnal. Armadilloes of three species formerly abounded, they are edible and steadily diminish in numbers.

To the naturalist much of interest has gone, yet much is still left; for the lover of birds the Argentine Republic is a happy hunting ground. Ducks of many species swarm wherever there is water, the Falkland Island goose is becoming a plague in the winter season, flamingoes, roseate spoonbills, ibises, herons and storks are common, and there is an immense variety of smaller birds including at least one whose song compares favourably with the best of our English song-birds.



The Argentine Estanciero enjoys a fine climate and a fine soil. Generally speaking he is fairly prosperous, but life is not all roses, and the plagues and calamities to which he is subject are often of a wholesale and devastating nature. Hail may ruin in a few minutes the most promising of crops. Drought may compel him to sacrifice his stock at starvation prices, or to hire land in unaffected districts at a distance whither he must move his herds lest they starve. Fire may sweep the pastures and leave a blackened wilderness. The common locust rarely penetrates so far south, but of recent years a smaller variety of the size of a grasshopper has increased and multiplied until it has become a very serious plague. These insects appear in early summer, and in a short space of time will consume every green thing. They do not migrate for great distances, as do swarms of the larger variety, but on windy days they will drift for many miles flying just above the grass-tops. Thus preventive measures on one property are useless if similar steps be not taken by neighbours.

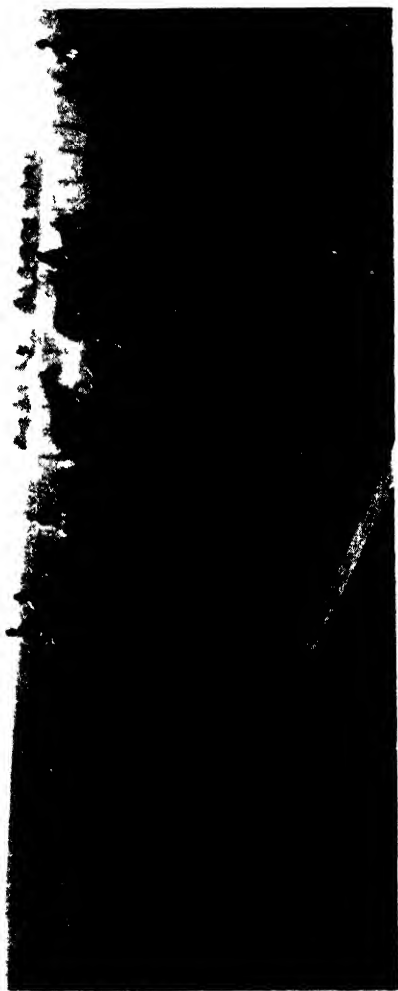
The loss caused by these insects in badly affected districts is hard to estimate, but it would amount to many thousands of pounds annually on an estate of twenty thousand acres. When this pest first became serious, it was generally believed that after a few years nature would step in to restore the balance, and that disease or other causes would destroy these locusts. This has not occurred, and now at last the matter is being dealt with by the Government, who insist upon the ploughing of affected areas with a view to the destruction of the eggs, which are laid just below the surface of the soil, and which, if moved, are destroyed. The ploughing of great areas is a very costly business, but it is hoped that the heavy expense and inconvenience may produce satisfactory results.

Many other plagues exist. Foot and mouth disease of which so much has been heard, is not uncommon, but in form it is very mild as compared to that known in England, and affected animals very soon recover. Loss of condition is comparatively small and recovery is often complete in a fortnight. Prices of stock are subject to great fluctuations, "meat-wars," strikes, conditions in European markets, all affect the Estanciero's profits, and although from time to time exceptionally high dividends are earned, lean years and losses are all too frequent. Land is now valuable, and for reasonably good Camp two hundred and fifty to three hundred dollars per hectare would be a normal price, or say £8 per acre, and a return of from 7% to 10% might be expected.



No. 1. A "Rodeo."





No 11 Draught Horses



Taxation and wages rise steadily. An Income Tax does not yet actually exist, but it has been accepted in principle by the legislature and cannot long be delayed. The cost of living rises, and, though in a modified form, the whole process with which we in England are so painfully familiar is being repeated in Argentina. Labour becomes increasingly "class conscious," strikes in the cities, ports, and railways, are frequent, and are often accompanied by sabotage and violence. The future therefore is not wholly bright. Yet the Argentine Republic produces those staples which are needed in ever-increasing quantity by the ever-growing population of the world, and a steadily increasing, though fluctuating, demand must continue for beef, mutton, wool, and grain.

### III.—SPORTING RIGHTS.

*By Hon. D. Meston.*

At Common Law the right to take and kill game belongs to the tenant, and not to the landlord, by virtue of the tenant's property in the land. It is very common, however, for the landlord to reserve the right to the game in the contract of tenancy. Most agricultural leases in writing will be found to contain a reservation of the game to the lessor. An agreement by the tenant not to destroy game is not a reservation of game to the landlord at all—see *Colman v. Bathurst* (1871) L.R. 6 Q.B. 366, but a covenant to preserve game runs with the land, and may be sued on by an assignee of the reversion. Thus, in *Hooper and Another v. Clark* (1867) L.R. 2 Q.B. 200, one A. granted and demised the exclusive right and licence to take and kill game on certain land to the defendant for a term of seven years. The defendant covenanted that he would at the end of the term leave the estate as well stocked with game as at the time of the demise. A. afterwards and during the defendant's term assigned his reversion to the plaintiffs. At the end of the defendant's term, the plaintiffs brought an action against the defendant for a breach of his covenant. It was held by the Court of Queen's Bench that the demise was not a mere licence, but the grant of an incorporeal hereditament; that the covenant touched the thing demised and the assignees of the reversion could sue upon it.

Sporting rights are frequently granted by a landowner, either retaining the occupation of the land himself, or having let it with

a reservation of the rights. In such cases the grantor of the sporting rights is allowed to do certain things in the ordinary course of management of his lands notwithstanding that the sporting rights may have been let to another person. Thus, in *Gearns v. Baker* (1875) L.R. 10 Ch. 355, it was held that a landowner, who has demised for a term of years the right of shooting over his lands, is not thereby prevented from cutting down timber as he thinks fit in the ordinary management of his land, although the cutting down will prejudice the shooting. In that case the exclusive right of shooting was granted over about 1300 acres of land for a term of twenty-one years. Shortly after the commencement of the lease, the landowner advertised for cutting and sale 7,500 trees, including practically the whole which were standing in five of the plantations on the 1300 acres, and he proposed to allow the purchaser to fix and use a steam-engine and sawmill for the purpose of cutting down the timber. The lessee alleged that the cutting the trees and grubbing would destroy the cover for game, and that the drawing the timber and putting up the saw-mill would interfere with and disturb the game. He therefore claimed an injunction restraining the landowner from cutting the timber on the ground that the above acts would interfere with the shooting. It was held by the Court of Appeal that the injunction could not be granted. As *Sir W. M. James, L. J.*, pointed out in the course of his judgment (at p. 357): "It is preposterous to suppose that a man who grants a shooting lease for twenty-one years is to be dictated to by this Court as to whether he shall cut down a tree or remove a coppice, because by doing so he would be driving away the hares or interfering with the breeding of the pheasants. If men mean to acquire such rights they must express their meaning clearly. I am of opinion that such rights are not expressed and not implied in the ordinary grant of shooting, and that this Court has no right to interfere in the way suggested." Nor does it make any difference that the lessee may have expressly agreed to allow the lessor to enter the coverts for specified purposes consistent with non-disturbance of the game, and that the lessor has expressly covenanted for quiet enjoyment. Thus, in *Dick v. Norton* (1916) 114 L.T. 548, sporting rights were let to a tenant for a period of five years, and the tenant covenanted "to permit the owner to enter into the coverts at any reasonable time consistent with the non-disturbance of game for the purpose of thinning the plantations, felling trees, or any necessary forester's work, the owner to make good any hedges or fences which may be damaged by the owner in consequence thereof." The owner covenanted for quiet

enjoyment. The tenant sought an injunction to restrain the owner from felling timber on the land in question, and it was admitted that the removal of such timber would interfere with the shooting amenities of the property. It was held by *Eve J.*, following the decision in *Gearns-v.-Baker* (*supra*) that the demise of shooting rights, even though there was a covenant for quiet enjoyment, did not prevent a landlord from turning his property to the best uses for which it was suited, and that, therefore, an injunction must be refused. The felling of timber is not the only act which the landowner may lawfully do notwithstanding the fact that the sporting rights have been demised. Thus, in *Pattison-v.-Gilford* (1874) L.R. 18 Eq. 259, the owner of an estate, the shooting over which had been let for a term of twenty-one years, issued particulars of sale of the estate in several lots for building purposes. The particulars showed that it was intended to make a road through the estate and dedicate it to the public, but gave full notice of the right of shooting. The Court refused to grant an injunction which was sought by the tenant to prevent the intended sale of the property, for, as *Jessel M. R.* pointed out, there is nothing to prevent a landlord who has granted the right of shooting over his estate from afterwards selling his estate in lots.

But the decision in *Pattison-v.-Gilford* (*supra*) must not be regarded as being in support of the proposition that the owner of land, which is let subject to sporting rights, may erect buildings on the land so as materially to interfere with the sporting rights. Thus, in the recent case of *Peech-v.-Best and Others* (1930), 46 T.L.R. 467, it was laid down by the Court of Appeal that a landlord who lets the shooting on his farm land with a covenant for quiet enjoyment, and who during the tenancy sells part of the land for the erection of buildings which would destroy or seriously affect the sporting rights over the land sold, is liable for damages at the suit of the shooting tenant. In that case, the defendant B. was the owner of an agricultural estate of 700 acres. In July 1921 B. granted to the plaintiff "for a term of 14 years from March 25th, 1920, the exclusive right of shooting and sporting in and over the land" in question. The plaintiff covenanted that he would keep up the game on the land, and B. covenanted for quiet enjoyment. In November 1929, B. sold to the defendant M. 12 acres of the land, the subject of the grant of shooting rights, knowing that M. intended to erect training stables on the land for 36 horses and certain cottages for a caretaker and six stable boys. It was held by the Court of Appeal, affirming the decision of *Mr. Justice Avory*, that the erection of the above stables and cottages would materially



affect the sporting rights and constitute a breach of the covenant for quiet enjoyment given by B. to the plaintiff. The plaintiff was accordingly awarded £100 damages for the interference with his sporting rights. As *Lord Justice Scrutton* pointed out in the course of his judgment (at p. 471): "It appears to me that fundamentally changing the character of the land over which sporting rights are granted, though it is not with the deliberate intention of injuring the sporting rights, and though it is a thing which a landowner would have power to do if he does not injure the rights of others, if it has the necessary effect of substantially injuring the rights of others is a derogation from the grant, and is a substantial interference with the *profit à prendre* granted. . . . I should doubt myself, when the stable for 36 horses and the six stable boys are in occupation, whether a game bird would be left within a quarter of a mile of the stable. In my opinion this is a derogation from the grant, and an infringement of the rights of *profit à prendre*, and a breach of the covenant of quiet enjoyment, and the plaintiff is entitled to the damages awarded."

In every case sporting rights must be exercised in a reasonable manner. Thus, in *Hilton-v.-Green* (1862) 2 F. & F. 821, it was held that a shooting tenant must not tread down crops in an unreasonable manner, or turn rabbits on to the land. In *Birkbeck-v.-Paget* (1862) 31 Beav. 403, it was held that the lessee of sporting rights over land is not justified in turning out on it game bred elsewhere so as to injure the crops. And it appears that in such a case the lessor is justified in keeping down the excess of game thus brought on to his property. And in *Farrer-v.-Nelson and Another* (1885) 15 Q.B.D. 258, a certain farm was let to the plaintiff, but the sporting rights over the farm were let to the defendants. The defendants overstocked the land with game so as to cause damage to the plaintiff's crops. It was held that when the lessee of shooting rights brings on game to an unreasonable amount or causes it to increase to an unreasonable extent, he is doing that which is unlawful, and an action may be maintained by his neighbour for the damage which he has sustained. The defendants were therefore held liable in damages for the injury thus done to the plaintiff's crops.

A lessee of sporting rights is entitled, however, to do such acts as are in fact reasonably necessary under the circumstances for the preservation of the rights. Thus, in *Cope-v.-Sharpe* (1912) 1 K.B. 496, the plaintiff, who was the owner of land, let the shooting rights over the land to the defendant for a term of two years. A serious

fire broke out on the land on the south side of a part of the shooting where there was a covert affording shelter to nesting pheasants. While some men were engaged in beating out the fire the defendant set fire to strips of heather between the place where the fire had broken out and the above-mentioned covert. It was held by the Court of Appeal that the defendant was justified in adopting such means to extinguish the fire.

The right to kill ground game (*i.e.* hares and rabbits) is inseparable from occupation. In this connection it is provided by the Ground Game Act, 1880, s. 1, that "Every occupier of land shall have, as incident to and inseparable from his occupation of the land, the right to kill and take ground game thereon, concurrently with any other person who may be entitled to kill and take ground game on the same land provided that the right conferred on the occupier by this section shall be subject to the following limitations: (1) The occupier shall kill and take ground game only by himself, or by persons duly authorised by him in writing; (2) the occupier himself and one other person authorised in writing by such occupier shall be the only persons entitled under this Act to kill ground game with firearms: (b) no person shall be authorised by the occupier to kill or take ground game, except members of his household resident on the land in his occupation, persons in his ordinary service on such land, and any one other person *bona-fide* employed by him for reward in the taking and destruction of ground game. ."

The words "members of his household resident on the land in occupation" in the Ground Game Act, 1880, s. 1 (2) (b) (*supra*) include a visitor staying in the house (*Stuart-v.-Murray* (1884) 12 Rettie, 9), but do not include a friend who has been invited for a day's shooting (*Niven-v.-Renton* (1888) 15 Rettie, 42). As to the position of a visitor, Lord Young said in *Stuart-v.-Murray* (1884) 12 Rettie, at p. 11): "I think that a visitor may very well be a member of a man's household. To what length the visit must extend it is not necessary to define, but one who is there *bona-fide* for a week may certainly be so regarded, and unless we are to go the length of saying that leave is not to be given to any visitors at all, I think he may have it. If a man invites his nephew, let us say, for a year, for the summer, for a month, or for a week, is he not to give him leave to shoot? Or if a farmer invites a school companion of his son to stay with them in the holidays, is he not fairly a member of his household? If such a person *bona-fide* got leave to shoot, I should certainly decline to convict him as a poacher of a criminal offence. An invitation to live in the farmer's house, and a permission to shoot rabbits, both being

in *bona-fide*, would be a good defence to any such charge." In *Niven-v.-Renton* (*supra*) the applicant merely had permission from the occupier for a day's shooting on the land to kill hares and rabbits. The appellant had never been in the occupier's house, and he had never been on the farm except on the day in question when he went there to shoot. The Court of Justiciary in Scotland held that it was quite impossible to regard the appellant as a member of the occupier's household. As to the words "any one other person *bona-fide* employed by him for reward" in the Ground Game Act, 1880, s. 1 (1) (b) (*supra*), we may refer to *Bruce-v.-Prosser* (1898), 25 Rettie, 54, where the respondent had leave from the joint tenants of a farm to enter upon their land at any time, night or day, for the purpose of killing ground game, and the respondent was to get all the game he killed as reward for his services, but to receive no other reward than the game he killed on the land. It was held by the Court of Justiciary in Scotland that the respondent was not infringing the above provisions of the Ground Game Act, 1880. As Lord Trayner said in the course of his judgment (1898) 25 Rettie, at p. 59): "The statute does not limit reward to money payment, and I am unable to say that the reward which was given to the respondent was not a reward which may be covered by the language of the statute."

In conclusion we may deal with the rating of sporting rights. In this connection it is provided by The Rating Act, 1874, s. 3 (2) that the poor rate shall extend to "rights of fowling, of shooting, of taking or killing game or rabbits, and of fishing when severed from the occupation of the land." And Section 6 of the same statute provides that "(1) Where any right of fowling, or of shooting, or of taking or killing game or rabbits, or of fishing (hereinafter referred to as a right of sporting) is severed from the occupation of the land, and is not let, and the owner of such right receives rent for the land, the said right shall not be separately valued or rated, but the gross and rateable value of the land shall be estimated as if the said right were not severed; and in such case if the rateable value is increased by reason of its being so estimated, but not otherwise, the occupier of the land may (unless he has specifically contracted to pay such rate in the event of an increase) deduct from his rent such portions of any poor or other local rate as is paid by him in respect of such increase; and every assessment committee, on the application of the occupier, shall certify in the valuation list or otherwise the fact and amount of such increase." Subsequently the rates payable on agricultural land were reduced to one-half by the Agricultural Rates Act, 1896,

and then to one-quarter by the Agricultural Rates Act, 1923, and finally the liability to pay rates on agricultural land and agricultural buildings was extinguished altogether by the Local Government Act, 1929, s. 67. And the Rating and Valuation (Apportionment) Act, 1928, s. 1, made a distinction between (a) agricultural hereditaments; (b) industrial hereditaments; (c) freight-transport hereditaments; and by Section 2 enacted that “(1) In this Act the expression ‘agricultural hereditament’ means any hereditament being agricultural land or agricultural buildings; (2) In this Act the following expressions have the meanings hereby respectively assigned to them:— ‘Agricultural land’ means any land used as arable, meadow or pasture ground only, land used for a plantation or a wood or for the growth of saleable underwood, land exceeding one-quarter of an acre used for the purpose of poultry farming, cottage gardens exceeding one-quarter of an acre, market gardens, nursery gardens, orchards, or allotments, including allotment gardens within the meaning of the Allotments Act, 1922. *but does not include . . . land kept or preserved mainly or exclusively for purposes of sport or recreation.*” In the case of *Hastings-v.-Revenue Officer for Walsingham Rural District Council* (1930) 2 K.B. 278, it was held by a Divisional Court of the King’s Bench that sporting rights over agricultural land, when severed from the land and not let, are separate hereditaments and not agricultural hereditaments, and are therefore *not* exempt from liability to rates. In such cases, therefore, sporting rights are to be treated as the subject of a separate assessment in the valuation list. Finally, it is provided by The Rating Act, 1874, s. 6, that “(2) Where any right of sporting, when severed from the occupation of the land is let, either the owner or the lessee thereof, according as the persons making the rate determine, may be rated as the occupier thereof; (3) Subject to the foregoing provisions of this section the owner of any right of sporting, when severed from the occupation of the land, may be rated as the occupier thereof; (4) For the purposes of this section, the person who, if the right of sporting is not let, is entitled to exercise the right, or who, if the right is let, is entitled to receive the rent for the same, shall be deemed to be the owner of the right.”

## IV.—THE SUGAR BEET CROP.

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## THE VALUE AND USE OF ITS PRINCIPAL BY-PRODUCTS.

On the Continent, where the sugar beet crop has been established some 100 years, it is well recognised that the position of the crop in the general economy of the agricultural industry turns very largely upon the full and efficient use of the two principal by-products available to the farmer, viz. (1) the grower's own by-product, the "tops," which comprise the crowns and foliage cut from the roots before the dispatch of these to the factory, and (2) the pulp, a by-product of the extraction process, which comprises the remains of the pulped roots after they have passed through the diffuser, where the sugar and some other constituents are extracted in solution. Both of these by-products offer the farmer valuable food for livestock, and, through the consuming stock, manurial residues for his crops. The tops by-product may be utilised for its manurial value direct, but it will presently be shown that such use must entail a serious waste of food matter that possesses no manurial value, or at the best no certain manurial value.

An average crop of sugar beet will leave behind something like 5—6 tons of crowns and leaves per acre; this figure varying of course according to season, soil, weather and crop conditions; under some conditions double the weight referred to is readily obtained, and with a better national yield per acre of beet, the average figure given would be much higher.

In the case of pulp, the factories estimate that 100 tons of washed beet will result in the production of 5 tons of dried beet pulp or of 8 tons of Molasses pulp, which is to say that at least 5% of the clean produce in tons of roots per acre will become available again to the farmer for stock feeding purposes—this figure will become 8% if the pulp is produced in the form of Molasses pulp.

Thus the average beet crop of 8—9 tons of clean beet per acre will produce for stock feeding purposes 5—6 tons per acre of succulent fodder in the form of tops, and from  $8\frac{1}{2}$ — $12\frac{1}{2}$  cwt.—according to the form in which it is taken—per acre of dry pulp. The national yield of beet is very low and is capable of much

improvement, and it is obvious that with an improved yield both the production of tops and of pulp must be greater, and of course this holds everywhere to-day where heavier crops are being grown, as is the case over large areas. This means, referring to average figures again, since a given weight of pulp is worth 8 or 9 times as much as a similar weight of swedes for feeding purposes, and since 1 ton of tops is worth  $1\frac{1}{2}$  tons of swedes, that an acre of sugar beet produces, on the present average of yields in this country, from  $9\frac{1}{2}$  to  $12\frac{1}{2}$  tons of live stock food in addition to the main product—the sugar root; with the better crops, of course, this return is heavier.

The significance of all this lies in the fact, which the statement must make apparent, that the sugar beet crop is a stock farmer's crop, a crop for the mixed farm and essentially so if the crop be made the most of.

There is an increasing tendency to recognise this point in this country, and more and more attention is being attached to these two important by-products, and more and more the crop is tending to become part and parcel of the system of farming; though this latter position is more due to the undoubted husbandry value of the crop as a fallow crop, than from full recognition of it as a crop capable of fulfilling the requirements of a fallow crop from the live stock point of view.

On the full realisation of the significance of these by-products of the crop, depends very largely the future of the beet industry in this country—sugar beet most certainly cannot exist as a special crop, for without subsidy the sugar root cannot command a price sufficiently large to allow of it paying its way, if treated as a special crop.

Full use of the advantages offered by the by-products allows of the sugar beet crop being used by the farmer—the ordinary mixed farmer—in partial replacement of his ordinary root crop, and to replacement at a distinct advantage at that. For while the crop offers all the uses of the root crop, including a supply of winter succulent fodder, it also provides a cash crop—in strong contrast to the root crop—which will pay for cultivation and at prices that have ruled in past seasons provide a direct profit also. Obviously then, the incorporation of the crop into the farming system, with full use of the by-products for stock feeding, will make sugar beet an economic proposition for the mixed farmer when prices for the root must rule much lower than has yet been the case. Apart from this consideration it is fully recognised that

the national average yield of beet per acre is far too low for the permanence of the crop unassisted, and it is urgent that this average **yield** be raised, but since the raising of the yield of root will also **increase** the yield of by-products, then it is obvious that the assistance towards the permanency of the crop will come doubly, directly because of the increase of yield in roots, and indirectly through the increased production of stock food per acre, thus allowing the crop more and more to replace the root crop.

It is just such a position that sugar beet holds in the Continental beet growing areas. In 1925, the writer, talking to a prominent figure in the German sugar beet industry, was told that at that time the German sugar beet grower was depending absolutely upon his live stock, the feeding of which was based on the by-products of the beet crop, for his profits on his sugar beet, the price being paid to him at that time for his sugar root just covering costs of production. Bridges and Dixey, in their book "Sugar Beet," observe that all forms of live stock husbandry are practised in the beet growing districts, and say: "It would seem that the crop is readily adaptable to whatever type of live stock and system of farming the requirements of the district demand." And again: "The growing of sugar beet, coupled as it is with liberal supplies of by-products in the form of fodder, while demanding plentiful dressings of farmyard manure, seems to go hand in hand with a heavy head of live stock."

The writer is acquainted with a large estate of 12,000 acres, very largely arable, farmed by two partners, whereon the chief products are live stock, principally fat cattle and sheep, and barley of first-class malting quality. The two main products are somewhat interdependent, at any rate, the land being of a decidedly light nature it is absolutely dependent for its fertility—despite the heavy use of artificial manures—upon the "muck" produced by the live stock, and upon the treading of the sheep which must be regularly folded upon the land. The system of farming involved, essentially, the growing of large areas of roots annually, the large proportion of which was folded off. To-day, not an acre of "roots" is grown, the whole of the acreage usually given to the "root" crop being cropped with sugar beet, providing the estate with another source of revenue, and actually the stocking of the estate has been increased, in any case, it dare not have been reduced, or the land would have fallen in productive capacity. The tops of the beet are folded off with the sheep, thus beet tops replace roots in this case, and large quantities of beet pulp are brought

back on to the farm and this forms the basis of the winter feeding of the cattle.

Johnson and Rayns, in a paper to be referred to again later, draw attention to the use made of sugar beet as a means of replacing the root crop on an East Norfolk farm, in the heart of the bullock feeding area.

“ In 1923 31 acres of roots were grown on the farm, there was no sugar beet and the head of stock maintained was : cattle 45, pigs 0, and the number of men employed were : regular 8, casual 0.

“ In 1929 not a single acre of roots was grown, but there was 37 acres of sugar beet and the head of stock maintained was : cattle 57, pigs 100, and the labour was : regular men 7, casuals 3.”

In the German sugar beet growing areas, sugar beet and live stock are interdependent, since the stock feeding is based on the by-products of the beet crop, and since the manuring of the crop is based on the manure produced by the stock. Farmyard manure is the sound basis of sugar beet manuring, and thus, however sugar beet is treated, as a special crop or otherwise, it is dependent, if regular success is to be achieved, on live stock for its basal manure.

It is now necessary to consider each by-product in detail. Dealing with the tops first of all, the following are analyses reflecting the composition of the tops (a) according to Kellner's standard work, “The Scientific Feeding of Animals,” and (b) according to Woodman & Bee in their article “Nutritive and Manurial Values of Sugar Beet Tops,” which appears in Vol. 17 of the *Journal of Agricultural Science*, and which is a report of their investigations into the values of sugar beet tops.

	(a) <i>Kellner.</i>		(b) <i>Woodman &amp; Bee.</i>	
	Constituents.		Constituents.	
	Crude.	Digestible.	Crude.	Digestible.
Total dry matter .. ..	16.2	16.2	16.2	16.2
Crude Protein .. ..	2.3	1.7	2.03	1.43
Crude Fat .. ..	0.4	0.2	0.45	0.28
Nitrogen free .. ..				
Nutrients .. ..	7.4	5.9	8.68	7.17
Crude Fibre .. ..	1.6	1.1	1.61	1.14
Ash .. ..	4.8	—	3.43	—
Nutritive ratio .. ..	—	4.4	6.3	—
Starch equivalent per 100lbs. —	—	7.5	8.55	—

These figures are worth comparison with those for the three



principal root crops as given in Bulletin No. 156b issued by the Department of Agriculture of the University of Leeds :—

				<i>Mangolds.</i>	<i>Swedes.</i>	<i>Turnips.</i>
				Digestible constituents.		
Total dry matter	..	..	..	13	11.5	8.5
Protein	..	..	..	0.2	0.2	0.2
Oil	..	..	..	—	—	—
Carbohydrates and Fibre	..	..	..	9.7	8.3	5.5
Starch equivalent	..	..	..	7.5	7.0	5.3

Comparing the figures given it will first of all be noted that Woodman's and Bee's more recent figures show tops at a better value than Kellner's figures, that is, the figures being taken generally. The Nitrogen, free nutrients according to the Cambridge workers' analysis being much higher than in Kellner's analysis, and this fact is mainly responsible for the increased starch value figure returned by Woodman and Bee, and, coupled with a slight decrease in protein in comparison with Kellner's figures, also accounts for the wider nutritive ratio given by these more recent investigations. The Cambridge figures also show a lower ash content than do Kellner's figures. Woodman and Bee explain the divergence in that in the first place the tops used were carefully freed from adhering soil before being sampled for analysis, and in the second place, the proportion of crown to leaf was probably higher than in the case of the German sample. While these do not seem to be fully satisfactory reasons for the difference, it is difficult to advance other reasons except that it is probable that something is due to the general advance made in the breeding of the sugar beet since the time of Kellner's work, particularly the advance in the concentration of sugar in the plant. If such a proposition were accepted then the more recent figures from Cambridge might be taken as the more truly correct figures at the present day.

A notable feature of both sets of figures is the high digestibility of the nutritive constituents, in particular, the high digestibility of the fibre.

The following are the Digestibility Co-efficients of the different constituents in the case of ruminant animals. The figures are Kellner's :—

	Organic matter.	Crude Protein.	Crude Fat.	Nitro. free Extract subs.	Crude fibre.
	72	41	30	82	67
Extreme variations	68—77	37—48	7—49	78—87	61—72

The protein content of sugar beet tops is much higher than that

of any of the root crops, and although the digestibility of the protein is on the low side, yet tops remain a much more potent source of protein than the root crops.

In leaflet No. 203, "Sugar Beet Growing," issued by the Ministry of Agriculture, it is stated that it is computed that the Starch Equivalent of the material is 54 lbs. per 100 of dry matter—a very satisfactory nutritive value, higher than that of the best quality meadow hay.

When a comparison is made with the analysis figures of the three common root crops, it will be seen at once that the tops provide a food of greater richness than any one of these fodder crops. The "tops" contain a greater percentage of dry matter, and they show a starch equivalent figure in advance of any one of the root crops. Woodman and Bee, in the article already referred to, show that 25 lbs. of tops are the equivalent of 40 lbs. of mangolds and that thus mangolds may be replaced by tops in actual rations in such proportions. In the figures given Woodman and Bee have taken the dry matter content of mangolds at §10.7 per cent. and that of sugar beet tops at 16.2 per cent.

The following are the figures given by Woodman and Bee :—

	lbs. dry matter.	lbs. starch equivalent.	lbs. digestible protein.
40 lbs. of Mangolds ..	4.30	2.20	0.28
25 lbs. Sugar Beet Tops ..	4.05	2.14	0.36

A constituent of sugar beet tops that has not yet been mentioned, but which must have special notice, is oxalic acid ; this constituent is present in the leaves and may constitute as much as 6 per cent. of the dry matter of the unwilted leaves. Oxalic acid is a constituent of beet tops which may, if due precautions are not taken, give rise to very serious trouble in the case of the consuming stock, a state of oxalic acid poisoning being probable. Wilting of the tops quickly reduces the oxalic content and the reduction is progressive as wilting advances. A few days' wilting is sufficient to pull down the oxalic acid content to a point below the danger line. It is definitely a bad practice, definitely a dangerous practice, to feed fresh unwilted tops to any class of stock ; very serious results may accrue. The practice has been adopted in some cases, of running sheep over the crop just prior to lifting. Remark-  
ing on this practice, Woodman has observed that in some season

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§N.B.—This figure is a lower one than that given in the Leeds University Bulletin 156b, which are the figures on which later calculations in this article are based.

of high oxalic acid content some heavy losses are almost certain to be experienced.

Johnson and Rayns, in their paper (to which reference has already been made) "The Feeding of Sugar Beet By-Products" read to the Farmer's Club, refer to a case where the procedure is adopted and they note the farmer's precaution. The sheep are folded on the sugar beet before lifting and are allowed to consume all the leaves and a good part of the crowns. Chalk is fed with concentrates to overcome the oxalic acid difficulty.

In any case the oxalic acid content, even after the tops have been allowed to wilt, give a very strong laxative, and in cases scouring effect to the tops, and it is advisable whenever these are fed, to feed along with them precipitated chalk which renders the acid insoluble and therefore still less harmful either directly or as a scouring agent. Kellner advises a quarter pound of chalk to 250 lbs. of tops. In "Sugar Beet" Bridges and Dixey note that Zwagermann recommends the use of Phosphate of Lime as a corrective of the purging tendencies of the tops, and he further says that chalk must never be used for this purpose since it aggravates the trouble.

In any case since the tops are definitely laxative in character they should always be associated in actual feeding with plenty of dry fodder and with other foods likely to counteract this laxative tendency. Johnson and Rayns, in their paper already referred to, mention a case where serious losses occurred amongst in-lamb ewes folded on tops. The dead ewes were found invariably cast on their backs and extremely inflated. Since providing ground chalk in the troughs, the farmer has not lost a single sheep in this way. The ewes now get  $\frac{1}{4}$  lb. per day amongst 15 sheep.

Woodman and Bee in their paper draw attention to another interesting and important aspect of the oxalic acid content; the lime content of beet tops is pretty high, the following table contains Woodman and Bee's figures for the analysis of the ash of beet tops, the figures being given as percentages of silica free ash:—

Lime (Ca O)	..	..	..	14.5%
Phosphoric Acid (P <sub>2</sub> O <sub>5</sub> )	..	..	..	4.0%
Potash (K <sub>2</sub> O)	..	..	..	23.2
Soda (Na <sub>2</sub> O)	..	..	..	19.0

The results obtained in their digestion trial with sheep, they say suggest that the lime in the sugar beet tops may not be in a form available to the animal, possibly on account of the presence of oxalic acid in the leaves, and they further observe that it is possible,

although the point needs definite investigation, that the oxalic acid in the leaves may render not only the lime in the tops unavailable, but also more or less of the lime in other feeding stuffs fed along with the tops. That this is a most important consideration needs no emphasis, especially to dairy cow feeders and to breeding and young stock feeders, and in view of this possibility, there is a further definite reason for the use of lime or phosphate of lime in conjunction with beet tops.

The analysis given above of the composition of the ash is of interest, showing as it does a low phosphate content with high lime, potash and soda. Woodman and Bee's note on the apparent lack of availability of the lime has been mentioned so that it is obvious that beet tops do not form a food rich in the more essential minerals. The sand content of sugar beet tops may rise to a very high figure, and this is almost entirely due to extraneous dirt. Bridges and Dixey note that Roemer says that "sometimes as much as 20 per cent. of sand is on the leaves when given to animals—this is a German observation, of course. The feeding of large quantities of earthy matter may lead to serious results indeed, and it cannot be over stressed that beet tops intended for feeding must be kept clean. If beet tops are to be kept in a state fit for feeding, some special care is necessary at the time of lifting the crop, the more so if land conditions are wet; the tops must be kept out of the way of the carts and of the trampling of the horses and men. Thus it is obvious that there must be some effort to collect them separately before much other work goes on. This may seem to entail a lot of trouble and may present some difficulty in carrying out, but if the material is worth feeding at all, and it very certainly is, then it is worth sufficient trouble to ensure its collection in a state best fitted for feeding.

Once again turning to Johnson and Rayn's paper, it is there suggested that it is possible that some of the ills attributed to oxalic acid, particularly amongst sheep when folded on tops, are due to sand. When the tops are trampled, very considerable quantities of sand may be consumed by the animals, and it is further suggested that, unless care is exercised, the rations consumed may be lime deficient, and that the sheep may even be induced by this deficiency to lick the earth as they are known to do when mineral matter is lacking in the food. On account of this sand trouble great importance is attached by some successful farmers to the procedure of folding. The sheep are given a run at grass during the morning, and while they are there the tops are shaken

out of the rows in which they have been lying since they were topped—the object being to remove as much dirt as possible. The sheep are brought back to the fold in the afternoon—the fold being regulated so as to allow the sheep time to clear up most of the tops before dark.

While these suggestions may tend to the consumption of cleaner tops, and the regulation of the folds should also tend to reduce waste by trampling, nevertheless, direct folding must lead to much waste—indeed, Johnson and Rayns imply that this is so and note steps that are taken to recover some of the buried crowns, it being worth while, so they have been told, to send a man to fork out the buried crowns. The writer will refer to this point again and will suggest another method.

Johnson and Rayns refer to two methods adopted to preserve the tops from trampling, etc., in the lifting period. In the one case the beets are gathered four rows into one, thus leaving “lanes” wide enough for horses and cart—this must depend upon width of row. And in the second case the beets are topped and thrown straight into the carts, arranging the work so that the carts do not pass over the lifted area.

The writer attended the October 1930 trials of beet lifters and combined harvester toppers at the Norfolk Agricultural Station, Sprowston, near Norwich, and a point that struck him very forcibly was the fact that while undoubted progress had been made in the design and in the work performed by these combined tools, and that admittedly in certain cases it looked, at face value, as if they must now be given some consideration as commercial propositions, and their value assessed on their possible labour-saving effect, after duly weighing against them their less efficient work as compared with hand labour, yet in every case of the combined topper harvester machine the tops suffered serious mangling and mixing with the soil, rendering them obviously of but questionable value for stock feeding. To the writer's mind, this undoubted fact condemned these implements right away, for through their feeding value tops must, and very often do to-day, play a most important part in the economy of the sugar beet industry from the grower's point of view. One method of lifting demonstrated at Sprowston did, however, strike the writer as offering possibilities in advance of present methods in vogue in this country from the point of view of the preservation of the tops, that was the Wunsche topping hoe in association with the Siedersleben lifter. These hoes are hand tools, and hand labour tops the beet ahead of the tractor-

drawn lifter, cutting off crown and leaves at ground surface, and the tops must be thrown aside out of the way of the lifter. It was evident that with a little arrangement it would be possible to keep the tops absolutely to themselves, and thus keep them clean and good. In any case it is sure that a combined topper and lifter is of no real universal value until it is so arranged that the tops are treated carefully.

So far, then, we have assessed the tops as a succulent carbohydrate food of high nutritive value showing a better feeding value than any one of the root crops, of definitely laxative character, and low in mineral value. It is now necessary to turn to the actual use of the tops. After wilting, the tops may be fed to any class of stock, but they are really turned to best account in the feeding of ruminant animals, and there is less danger in feeding them to this class of animal, since Kellner observes that generally oxalic acid undergoes partial fermentation in the first stomach of the ruminants, but that in pigs and horses this preventative arrangement fails.

Wilting should be allowed for a few days, and then the tops are advisedly gathered into small heaps on the field where they will keep for 4 to 5 weeks. Large heaps must not be made or putrefaction will soon set in, and on no account must rotting tops be fed to animals. The tops must not be gathered into heaps in a wet state or they will not keep. The fodder may then be carted as required to the yards, or it may be fed back to sheep in folds. A very common practice is to put sheep on to beet tops in comparatively big folds, and to allow them to pick up the tops from the spot where they dropped from the topping knife, this is a most wasteful method since large quantities of good fodder are trampled underfoot, the more so in wet weather, and nothing like the best is made of the material. The writer urges that in folding sheep on beet tops, these should be collected into heaps ahead of the sheep, and fed back to them in the folds, just as is the practice in folding sheep on roots, where the latter are cut for the animals. If the writer's suggestion is not adopted, at least the folding should be done carefully, the size of the fold being regulated as already referred to, according to the method mentioned by Johnson and Rayns. Where the tops are carted off sheep should be run over the cleared beet fields, since in any case the tops cannot be cleanly gathered by hand. Some German information open to the writer states that after the clearing and use of the tops in the

feeding of other animals there remains feed for roughly two sheep per acre over a period of 8 to 10 weeks, the sheep being given plenty of dry fodder morning and night. The tops may be fed "fresh" so long as they remain good, and this obviously depends much on prevailing weather conditions. The writer has known sheep folded on tops right through to the end of February, though by that time of course little was left but the crowns. Anyway, fresh tops can be used so long as the beet harvest continues, since obviously they are available all that time and the material will certainly keep a good long time after being topped, so that probably in most cases "fresh" tops would be available right up to Christmas. At any rate Johnson and Rayns note in their paper that it seems to be the general opinion, amongst the Norfolk sheep folders presumably, that the tops should be finished by the end of January, and in severe winters, even this date would be too late. Often, however, it would not be feasible, or good practice to leave the land occupied merely carrying tops awaiting consumption by stock off the land, and it is advisable to make some calculation as to the amount it is possible to feed fresh so that the surplus may be ensiled for later use. The process of ensilage must be definitely associated with the full economical use of the sugar beet tops. Unless this is so, in the majority of cases a large bulk of the material must be wasted, that is, in so far as the potential feeding value of the tops is concerned. In the beet growing districts of the Continent the ensilage of sugar beet tops is a recognised feature.

The necessary calculation referred to must be based on the estimated yield of tops per acre in any particular case, and on the estimated consumption per head daily, and of course on the number and type of animals to be fed. The average yield of tops has been suggested as 5—6 tons, but in many cases this figure will be largely exceeded, and with a very strong growth of top up to 10 or even 12 tons per acre may be the yield. Bridges and Dixey in "Sugar Beet" give the following figures for the estimated yields of tops per acre in different Continental beet growing countries:—

Holland .. .. .	10½ tons.
Germany .. .. .	6½ "
Belgium .. .. .	8 "
France .. .. .	6½ "

As for allowances per head, the German information already referred to, says the calculations are based on an allowance of 130 lbs. of fresh tops to cattle per head per day, this working out an acre of tops at a yield of 8 tons per acre, to be sufficient for 130—140 head of cattle per day.

These figures are given to illustrate the method adopted, and also with the view of illustrating the wholesale method of use adopted by the German farmer. The writer, speaking from the construction of the ration point of view, must condemn such figures as being even more wasteful than the 112 lbs. of roots per head daily fed by some bullock feeders.

Bridges and Dixey in "Sugar Beet" outline rations suggested by Zwagerman (Holland), which contain 90 lbs. of tops per head daily for milk cattle, 90 lbs. for young growing cattle, only 13 lbs. for store cattle of about 1,100 lbs. live weight and about 15 lbs. per head daily for pigs of about 110 lbs. live weight just commencing fattening. Kellner says one-third of the total ration of a dairy cow might be composed of tops, while a fattening bullock could be given more. While these figures may serve to give some idea as to quantities it is possible to use, the writer would suggest to the British feeder that he make his calculations on the basis of well-balanced rations. The tops are more valuable feed than roots, and therefore, if around 70–80 lbs. of Swedes might be included in a balanced ration for a fattening bullock, the quantity of tops permissible on the basis of the relative starch values of the two foods would be not more than 65 lbs. the calculation being as follows :—

80 lbs. of swedes in ration  $\times 7$  (*i.e.*, Starch value of swedes).  
8.55 (*i.e.*, Starch value of Beet Tops).

and in such fashion any feeder might roughly calculate the tops equivalent to his usual root ration, remembering to use the correct starch value for the particular type of root in question, viz. :—

.7. for swedes.  
7.5 „ mangolds.  
5.3 „ turnips.

It would be necessary to remember, however, that the protein content of tops is greater than that of roots, and therefore the ration would call for some adjustment of the protein content. Later on the writer has some suggestions to make relative to suitable rations containing tops, these rations are well balanced and the feeder might with advantage make his calculations as to quantities from these.

To refer again to the paper by Johnson and Rayns, some interesting details are given therein relative to the "keep" per acre supplied by tops in the case of folded sheep. After remarking that this is a difficult point to assess, they say that the yield of freshly cut green tops in the Norfolk trials was between 8 and 9 tons per acre,



which after wilting for three weeks were reduced to 5 tons ; in this condition the tops were folded and it was estimated that about one-third was trampled into the soil. Five acres of this furnished 564 sheep days per acre. No grass run was available and about two-thirds lbs. of hay and two-thirds lbs. of concentrate were given. In other recorded cases an acre of tops has provided keep for 280 and 300 ewe days, while from 700—1,200 sheep days have been reported where the flock has also had a run out on grass.

In any case the calculation is necessary, since the acreage to be used fresh and the acreage to be ensiled must be determined, for the tops to be ensiled must be ensiled about a week after topping. It is not advisable to leave the tops and then decide to ensile when it has become obvious that they cannot be used in the ordinary state before they go rotten. Good beet top silage can only be made by starting with sound, just sufficiently wilted, material.

Care should be taken in the use of the fresh tops. The amounts used should be restricted when they are in a frosted condition and in this condition they should never be fed to young or pregnant animals. Some advice says do not use them at all in a frosted condition and never to young or pregnant animals.

Zwagerman, according to Bridges and Dixey, gives a warning against feeding with tops gathered in the morning dew or in very wet weather. He also points out that it is always advisable to increase the ration of tops gradually. This is an obviously essential point and one which should never fail to be observed, it applies in the case of most feeding stuffs not alone in the case of beet tops.

Cranfield has drawn attention to an unpleasant "fishy" taint in the milk of cows fed on sugar beet tops, and he has established the cause as due to a compound called betaine which is present in the leaves. In connection with this Johnson and Rayns in the paper already so often referred to, recommend as the best method of overcoming the difficulty, so far as their experience goes, the introduction of tops to the cows in small quantities and to increase the allowance slowly. They say that the cows appear to be able to adapt their digestive functions so that the chemical reactions responsible for that taint, do not take place. The readers of the paper also point out, in connection with the use of tops, the necessity for the adoption of the usual precautions where using a food that is liable to taint milk, in the feeding of a dairy herd. The writer had experience of an interesting case of milk taint resulting from the feeding of tops. In this case persistence in the feeding of the tops—the fault was not until afterwards fixed on the tops—even-

tually led to the cows apparently adjusting themselves to the tops, and the trouble disappeared ; the tops were never discontinued.

The following are some suggested rations containing beet tops as the succulent basis :—

*Dairy Cows*—11 cwt. live weight.

Maintenance ration per head per day.

Fresh Beet Tops	..	..	..	30 lbs.
Good Oat Straw	..	..	..	21 lbs.

*Fattening Bullocks*—2 years old, weighing about 9 cwt. live weight.

Ration for commencement of fattening.

Fresh Beet Tops	..	..	..	65 lbs.
Straw, Oat or Barley	..	..	..	<i>ad lib.</i>
Beans	..	..	..	1½ lbs.
Maize	..	..	..	3 lbs.

*Tegs*, fattening, folded on tops.

Commencement per head daily.

Fresh Beet Tops	..	..	..	6—7 lbs.
Hay	..	..	..	1 lb.
Concentrate Mixture	..	..	..	½ lb.

A good concentrate mixture for such sheep would be—

Decort. ground Nut Cake	..	4 parts by weight.
Beans	..	2 " " "

the beans would assist the hay in correcting any undue laxativeness of the ration.

In the case of all the above rations, chalk or phosphate of lime should be used.

Beet top silage is universally made on the Continent ; without this large quantities of tops would be lost, Bridges and Dixey record that in Germany two-thirds of the harvest of beet leaves is preserved in this way. The practice has been attempted in this country, but has not yet “ caught on,” and the general tendency seems to be to fight shy of the business, but it is a practice that must be adopted if beet tops are to play their due part in the economy of the crop and of agriculture as a whole. The common Continental method of making the silage is to use the clamp or pit silo, the one or other according to the lie of the land and its condition from the point of view of wetness. The great essential to success is pressure, plenty of it, the horses and carts should continually pass over the heap, and the tops should be scattered and levelled by

hand, plenty of treading being done all the time. The usual German silo is made 14 feet wide by 7 feet high and about 2 yards of length is necessary per acre of tops to be ensiled. The heap is rounded off at the finish and a very thin layer of straw put over, on the top of which soil is placed. The heap should be allowed to settle for a day after completion and then soiled down. The top and sides should be covered with a good thickness of soil, between 1—2 feet. The tops will keep twelve months once well ensiled.

It is generally admitted that the process of ensilage entails considerable loss of nutrient matter, but the loss is very variable and turns upon the care with which the clamp has been made. Bridges and Dixey quote Remy as saying that the loss is not more than 10 per cent. of the crude albuminoids and starch, if care is taken—care amounting to the silos being watertight and on the sap being safely stored, and the silos being airtight. Losses are generally much heavier than this, according to various other authorities quoted by Bridges and Dixey, and 30 per cent. is a common figure given for the loss in weight which occurs. It is also observed that the loss is heaviest in the proteins, and that the digestibility of the silage is not so high as in the fresh leaves. This wastage can, as observed, be much reduced by careful building of the clamp, or the usual tower silos offers a much less wasteful means of making the silage, though it entails difficulties in filling. But in any case, the great points are plenty of pressure, quick building, and careful and even spreading of the tops in the silo.

Woodman has paid some attention to the question of beet top silage, and his observations and notes on results are published in the *Journal of the Ministry of Agriculture* for November 1927 (Volume XXXIV), under the heading "Notes on Feeding Stuffs for November." Woodman used a small silo of the tower type, and ensiled the wilted tops whole in November 1924, the tops being tightly packed. The silo was opened in March 1925; considerable settlement of the material had taken place. The silage was of good quality, possessing a pleasant, fragrant smell. It was cold and wet to the touch, sourish to the taste, and it had retained the faded green colour of the original material. There was an entire absence of the unpleasant odour associated with butyric acid. The crowns appeared to have suffered little change. Chemical analyses showed changes of the type usually associated with the production of good silage. The dry matter content had risen, mainly as a result of the loss of juice with an accompanying excessive loss of nutrient matter, amounting to 28 per cent. of the total organic matter.

In a further investigation by Woodman another Continental method was tried, viz., that of ensiling tops and wet sugar beet pulp in alternate layers, also in small tower silos. Here the results were very similar to that of the first investigation. The silage was eagerly eaten by both heifers and sheep, and digestion trials with sheep yielded eminently satisfactory results, no less than 81 per cent. of the organic matter being digested and utilized by the animals.

Eckles, in Bulletin No. 129, "Utilization of Sugar Beet Tops," issued by the University of Minnesota, notes that in trials on the University Farm, tops ensiled immediately after the removal of the beets from the field, and without any drying of the tops, produced inferior, unpalatable silage, with much waste. In other trials the tops were allowed to dry in the field for a week before being ensiled, and these produced satisfactory silage. In another season, although the tops were left in the field for a longer period, owing to weather conditions little drying occurred, and the silage was not satisfactory. Eckles observes that the tests proved that high moisture content in beet tops is disastrous to the silage, and that weather conditions may make it impossible to reduce the water content materially. As a result further tests were conducted, using fresh tops and adding oat straw to absorb the surplus moisture. It was found that where one-third straw and two-thirds tops, each by volume, were used, silage of good quality readily eaten by stock was produced; when more straw was used results were not so satisfactory.

In another test, using maize fodder with the tops the silage made, where 20% of the material used was dry fodder, was the best produced. Eckles observes that the results indicate that some provision must be made to reduce the moisture in the fresh tops in order to obtain good silage; in favourable weather this can be attained by drying in the field until the tops are wilted, while with unfavourable conditions the same result can be obtained by adding about 1-3rd chopped straw or 1-5th chopped maize fodder.

Here American results and observations are worthy of note and consideration. Such a use of dry material in the making of the silage should also lead to a reduction of the loss usual through drainage of juice from the silo.

Kellner observes that beet tops and leaves which have lain 4½ months in a pit silo lost 49 per cent. of dry matter; in a water-tight silo where the juices could not drain away the losses were

considerably less, being only 18 per cent. of the dry matter. He remarks the heavy losses on the protein substances in both cases.

The following are the figures given by Kellner relative to the composition of beet tops silage :—

	Crude nutrients.	Digestible nutrients.
Water .. .. .	77.0	—
Crude Protein .. .. .	2.4	1.5
Crude Fat .. .. .	0.7	0.3
Nitrogen free .. .. .	9.1	7.2
Extract substances		
Crude Fibre .. .. .	3.4	2.5
Ash .. .. .	7.4	—
Value of digested nutrients for production purposes (full value 100) ..	91	
Digestible true protein .. .. .	0.2	
Starch value per 100 lbs. .. .. .	9.5	

The material is thus essentially carbohydrate in character, more so than the original tops. Its protein value is of no account. The starch value is considerably higher than that of the fresh tops, and thus weight for weight it is more valuable. The figures generally indicate a highly nutritious food. The nutritive ratio of the silage is more nearly akin to that of roots than that of the fresh tops.

In actual use the silage will take the place of roots in rations, being particularly suitable for ruminant animals, it should be used with great care in the case of young and pregnant animals, and in the case of dairy cows it should not be forgotten that it is silage and the possibilities of contact taint of milk must be held in mind. Further in the case of dairy cattle, the possibility of taint arising from the original presence of the substance Betaine must still be borne in mind.

The material is strongly laxative, and precipitated chalk or phosphate of lime should be used with the silage in just the same way, and in the same quantities, as with the fresh tops, and it should also be associated in actual feeding with plenty of dry fodder, and of course, with other binding foods also, so far as possible.

The silage will replace roots or fresh tops in due proportion calculated on the respective starch values. For instance, the 80 lbs. of swedes already referred to in the ration for the fattening bullock which was replaceable by about 65 lbs. of fresh tops, would be replaced by silage as follows :—

$$\begin{aligned}
 &80 \times 7 \text{ (Starch value of Swedes).} \\
 &9.5 \text{ (Starch value of beet top silage)} \\
 &= \text{practically 59 lbs. of silage.}
 \end{aligned}$$

On such lines can beet top silage be substituted for roots or fresh tops in rations already constructed, provided that some attention is also given to maintaining the protein content when the silage replaces fresh tops.

In the rations given earlier in this article, where fresh tops are used as the basis of the ration, beet top silage might roughly replace the fresh tops in the following quantities :—

Dairy cattle, 11 cwt. live weight	..	..	..	27 lbs. daily.
Fattening bullocks, 2 yrs., weighing 9 cwt.	..	..	..	58—59 lbs.

Silage could be used in sheep feeding, but its chief use would be in cattle feeding.

Since, however, the silage is much poorer than the fresh tops in protein, a further adjustment would be necessary to maintain the balance of the ration. In the case of the dairy cow the silage should be reduced to 24 lbs., the oat straw to 14 lbs. and  $1\frac{1}{2}$  lbs. of Decorticated ground nut cake should be added to bring up the protein content of the ration. In the case of the fattening bullock the silage should be cut down to 50 lbs., the maize to  $1\frac{1}{2}$  lbs., the beans raised to  $2\frac{1}{2}$  lbs. and 2 lbs. Decorticated ground nut cake should be introduced.

Or, alternatively, the silage should be maintained at 58—59 lbs., the maize should be cut out, the beans raised to 2 lbs. and Decorticated ground nut cake introduced at the rate of  $2\frac{1}{2}$  lbs.

Bridges and Dixey in "Sugar Beet" quote rations suggested as suitable by Zwagerman, with pit silage made from beet tops. In these rations 55 lbs. of the silage is used for milk cows, 35 lbs. for well-grown store cattle, and 13 lbs. for pigs commencing fattening.

Before leaving the subject of beet tops, it is necessary to discuss the question of their manurial value and compare it with their value as a food stuff. Woodman in "Notes on Feeding Stuffs for December" Journal of the Ministry of Agriculture, December 1927 (Volume XXXIV) gives the following figures for the manurial constituents of average beet tops, of 17.2 per cent. dry matter :—

Nitrogen	..	..	..	..	0.34%
Phosphoric Acid	..	..	..	..	0.11%
Potash	..	..	..	..	0.58%

and he observes that if the tops are ploughed in, the whole of each of these constituents, it may be assumed, will become available as manure. This meant, on the basis of the prices ruling in October of that year, that the tops had a value of 5/11 per ton as a manure.

Where the tops are consumed off the land, Woodman says it may be assumed that then only half the Nitrogen and threequarters each of the Potash and Phosphoric Acid will become available as manure through the animal; and the manurial value per ton would be 3 6.

Thus even if the tops are consumed by the stock, the major proportion of the manurial value is recovered, but if the tops are not consumed, a very large bulk of the feeding value—being in the form of carbohydrate—is practically lost, except in so far as they add to the humus content of the soil, being of no direct manurial value whatsoever, indeed, suggestions have been put forward that the incorporation of large quantities of carbohydrate into the soil actually leads to a depression of yields, although it must also be observed that some recent investigations at Rothamstead have shown that by the addition of the simpler carbohydrates to the soil a rapid increase in bacterial numbers and further, an actual increase in soil Nitrogen, presumably through the agency of *Azotobacter*, occur in soils to which sugar has been added—and sugar would be added where tops were ploughed down.

Carslaw, Burgess and Rogers in “*Sugar Beet in the Eastern Counties 1927*” assess the full manurial value of tops at 5 8 per ton and the food value of the tops at £1 2s. 6d. per ton. The figures call for no comment, except that the tops when fed have still a residual manurial value, as Woodman observes.

It is very obvious that the use of tops as a feeding stuff means the getting of the very most out of them, and the mere, but easy use of them as a green manure entails the practically complete loss of much valuable feeding matter without the getting of any (at any rate direct) compensating increased manurial value.

To deal in detail now with that other by-product of the sugar beet industry, sugar beet pulp, a by-product of the extraction process. The stock-feeder generally, has now taken to pulp as a feeding stuff, and he is very often very enthusiastic about it. Largely he uses it in cattle feeding as a root substitute, soaking it in water prior to use. To a lesser extent the material is fed to horses, sheep and pigs, and less frequently still it is really recognised and used as a concentrate. The British demand for pulp is big enough now, but the average feeder is by no means certain how best to use it, as is shown by the very numerous requests for advice relative to its use which come in to County Agricultural Officers.

There are three types of beet pulp, enumerated as follows :—

1. Wet sugar beet pulp.
2. Dried sugar beet pulp.
3. Molasses sugar beet pulp.

The wet pulp constitutes the beet slices after extraction and prior to the drying process which produces the common dried form of pulp.

The wet pulp is not commonly used in this country, and in view of transshipment costs, and the fact that the material as such cannot be kept for any length of time, the reasons for its very restricted use are obvious. It is a material only calling for consideration where the farm is situate close to the factory, when the pulp can be carted out "fresh" at no big cost—particularly if beet is being delivered into the factory—and can be used right away in the feeding of cattle or pigs. The material may be preserved for later use by ensiling it, wet pulp may be ensiled alone or it may be ensiled in layers with sugar beet tops, in this way an excellent silage can be made, as Woodman has shown.

On the Continent much wet pulp is used, and the practice of ensiling it with tops is very common. Bridges and Dixey record that in Germany wet pulp is supplied 'untill about the middle of November, after which dried pulp is supplied. In this way the farmer obtains wet pulp to ensile with the tops or to feed fresh to his stock, the dried pulp filling the gap later in the winter. In Holland, France and Belgium the pulp is mostly turned out in the wet state.

Kellner's figures for the composition of wet sugar beet pulp are as follows :—

	Crude Nutrients.	Digestible Nutrients.
Water .. .. .	85%	—
Crude Protein .. .. .	1.3%	0.7%
Crude Fat .. .. .	0.1%	—
Nitrogen free .. .. .	9.9%	8.5%
Extract Substances		
Crude Fibre .. .. .	3.0%	2.2%
Ash .. .. .	0.7%	—
Value (full value=100) .. .. .	94	—
Digestible pure Protein .. .. .	0.6%	—
Starch value .. .. .	10.6%	—

Obviously a watery food of the carbohydrate class, low in protein and in mineral content. The dry matter is pretty highly digestible, and the digested nutrients are of good value. Of much higher starch value than any of the root crops, or of sugar beet tops, for which class of food it is obviously a substitute. The starch value



of swedes being 7, then it is clear that 1 lb. of wet beet pulp is the equivalent of  $1\frac{1}{2}$  lbs. of swedes, and swedes would have to be replaced, in such proportions. Since the use of wet pulp is so restricted (and is likely to remain restricted) it is unnecessary to discuss it in further detail.

It is convenient to deal with the two other forms of sugar beet pulp, viz., the Dried beet pulp and the Molasses beet pulp together. Both differ essentially from the form just dealt with in containing but a small percentage of moisture; thus they are in a condition more easy and less costly of carriage, and in a condition where ordinary storage is possible, and they are thus capable of wide-spread use. These are the two forms of pulp in common use amongst stock-feeders in this country, and the ordinary type—as distinct from the Molasses pulp—is the type that was exported so extensively to the United States of America in the early years of the intensive beet campaign, and before the English farmer came to recognise its value. The American farmer was wild after dried sugar beet pulp, paying uneconomic prices in order to get it; he particularly valued the material in the feeding of high yielding dairy cows where yields records were being sought.

Ordinary Dried beet pulp is simply produced from the wet pulp by the process of drying. It is a light bulky material of greyish colour, little odour and little flavour.

The Molasses pulp is made by mixing Molasses with wet pulp, and then drying the mixture as in the case of the preparation of ordinary dry pulp. The Molasses pulp is bulky like the ordinary material, but rather brown in colour—much darker than the ordinary—and carries more taste and flavour. Good dry samples of the ordinary material keep particularly well under good average conditions; no complaints have been received relative to the keeping qualities of Molasses pulp, but is a material that would not be expected to keep quite so well as the plain pulp. The keeping qualities of beet pulp turn much upon its moisture content, and this moisture content is a practical point for the farmer's consideration. Woodman and Calton in their paper "Composition and Nutritive Value of Sugar Beet Pulp," *Journal of Agricultural Science* (Volume XVIII), note that samples may vary in moisture content within the wide limit of 5 and 16 per cent., but a well dried and well stored sample should contain no more than 10 per cent. of moisture.

Woodman at Cambridge has done much valuable investigational work on beet pulp, and many of his figures and observations will

be referred to and reproduced here; they will largely be drawn from the paper already mentioned, "The Composition and Nutritive Value of Sugar Beet Pulp," by H. E. Woodman and W. E. Calton, which appears in the Journal of Agricultural Science (Volume XVIII).

The following are Kellner's figures relative to the composition of these two forms of dried sugar beet pulp :-

	<i>Crude Nutrients.</i>		<i>Digestible Nutrients.</i>	
	Ordinary.	Molasses.	Ordinary.	Molasses.
Water .. .. .	8.6	10.0	—	—
Crude Protein .. .. .	7.1	8.7	4.3	4.6
Crude Fat .. .. .	0.4	0.3	—	—
Nitrogen free .. .. .	67.9	60.8	63.8	52.0
Extract Substances.				
Crude Fibre .. .. .	11.8	13.8	9.0	8.2
Ash .. .. .	4.2	6.4	—	—
Value (full value = 100) .. .. .			77	81
Digestible pure Protein .. .. .			3.5%	2.7%
Starch value .. .. .			58.9	50.5

The following analysis is by Woodman (figures given in "Notes of Feeding Stuff," Journal of the Ministry of Agriculture, October 1928).

The figures below are on basis of 10% moisture.

	Ordinary.	Molasses.
Crude Protein .. .. .	8.89%	10.78%
Crude Oil .. .. .	0.64%	0.37%
Carbohydrate .. .. .	59.12%	58.25%
Crude Fibre .. .. .	18.25%	15.12%
Ash .. .. .	3.10%	5.48%
True Protein .. .. .	8.64%	7.38%
"Amides" .. .. .	0.25%	3.40%
Lime .. .. .	1.22%	1.22%
Phosphate .. .. .	0.18%	0.17%
Silica .. .. .	0.31%	1.31%
Potash .. .. .	0.59%	1.34%
Soda .. .. .	0.24%	0.31%
Value of Digested Nutrients (full value = 100) .. .. .	87	
Starch equivalent .. .. .	65.5	
Nutritive Ratio .. .. .	13.3	

Woodman points out the highly digestible character of sugar beet pulp when fed to ruminants—his work was done with sheep—his figures relative to the Digestion Co-efficients of the several nutrients are as follows :—

	Dried sugar beet pulp (fed dry).	Dried sugar beet pulp (fed after soaking.	Wet sugar beet pulp.
Dry Matter .. .. .	84	84.2	83.2
Organic Matter .. .. .	86.5	86.5	86.5
Crude Protein .. .. .	59.4	58.3	61.1
Crude Oil .. .. .	—	—	—
Carbohydrate .. .. .	92.0	91.1	91.0
Crude Fibre .. .. .	87.7	89.7	89.8

In their work reported in the *Journal of Agricultural Science* (Volume XIX), under the title of "The Value of Dried Sugar Beet Pulp and Molasses Sugar Beet Pulp in the Nutrition of Swine," Woodman, Duckham and French give the following figures for the digestion co-efficients of the pulp in the case of pigs :—

				Dried Sugar Beet Pulp.	Molasses Beet Pulp.
Organic Matter	..	..	..	80.2%	80.5%
Crude Protein	..	..	..	34.6%	24.4%
Ether Extract	..	..	..	—	—
Nitrogen free extractives	..	..	..	87.2%	89.2%
Crude Fibre	..	..	..	84.3%	84.4%

These figures make an interesting comparison with those given above for sheep.

Both sets of figures show essentially carbohydrate foods of rather high fibre content. Protein is not prominent, and the ash content is low. The Molasses pulp, by contrast with the ordinary type, shows, according to Kellner, a little higher moisture content, and both analyses show a higher crude protein content, which is apparently largely accounted for by the presence of much amide material derived from the Molasses; and Woodman's figures show, as might be expected, the Potash figure to be comparatively high. Apart from this heavy Potash figure in the Molasses pulp, lime is the most noteworthy constituent of the ash in the case of both types of pulp.

The figures show carbohydrate foods of high nutritive value; particularly do Woodman's figures show this. Woodman's figures show a high digestibility and a high availability (value) of the digested material. It is noteworthy that Woodman's figures are so much better than Kellner's in these respects. Woodman notes this, and says some explanation is possible; he says that the method of feeding the material has an influence on the final value of the digested material. The value of the digested material for maintenance or production purposes is 94% when the material is fed in the fresh wet condition; fed in this state the value figure of the pulp is at its highest. When large quantities of dried sugar beet pulp are fed in the dry state, the value figure falls to 78%. If the dried sugar beet pulp is soaked thoroughly in water before feeding the value figure then rises to 87%, and this latter figure is found to hold good when moderate allowances of dried beet pulp are fed in a dry condition in intimate admixture with other concentrates, so as to ensure softening by salivation. The facts just cited are of very great importance in the practical feeding of

beet pulp. If large quantities are being fed, then the material should be well soaked prior to use, if the material is used dry, then it must be fed in smaller quantities well mixed with concentrates.

The figures given show a very high digestibility of the carbohydrates and also of the fibre, both in the case of the ruminant animals and of the pig. Thus, while the food is a comparatively fibrous one, the fibre is so highly digestible that for all intents and purposes the food is not to be classed as a fibrous food. The digestibility of the protein of pulp is only moderate and really poor in the case of the pig.

Woodman has drawn an interesting comparison between dried sugar beet pulp and the two common carbohydrate concentrates, maize meal and barley meal. The following table gives a comparison of sugar beet pulp and maize meal on a dry matter basis :—

	Sugar Beet Pulp.	Maize Meal.
Digestible Protein .. ..	5.89%	8.16%
Digestible Oil .. ..	—	4.48%
Digestible Carbohydrate .. ..	60.04%	75.52%
Digestible Fibre .. ..	18.07%	1.50%
Total digestible organic matter ..	84.00%	89.66%

The following table compares the starch equivalents and the nutritive ratios of sugar beet pulp, maize meal and barley meal, again according to Woodman :—

	Dried Sugar Beet Pulp. 10% moisture.	Barley Meal. 14.9% moisture.	Maize Meal. 13% moisture.
Value .. ..	87	98	100
Starch equivalent per 100 lbs. ..	65.5 lbs.	71.0 lbs.	81.4 lbs.
Nutritive Ratio .. ..	13.3	10	11

These figures help to establish the undoubted position of dried sugar beet pulp as a carbohydrate concentrate, to be thought of amongst that class of foods to which maize, barley and rice meals belong. The common idea has been, and still largely holds, that dried sugar beet pulp is just a possible substitute for roots. While this conception is undoubtedly true, it does not represent the whole story, and Woodman has definitely established its position as a concentrate, and many feeders have in practice turned the results of his work to advantage, for up to the present season beet pulp has represented the cheapest, and that by a long way, carbohydrate concentrate available, while to-day, to the beet growing farmer at a price of £5 per ton delivered to his station, it is still quite a cheap

cost (in November 1930) of  $1/4\frac{3}{4}$  per unit of starch  
 by comparison with maize grain at 1/- per unit, and barley  
 (feeding quality) at  $1/4$  per unit of starch value. As a con-  
 centrate beet pulp is fed dry in moderate quantities well mixed  
 with other foods in a balanced ration.

The value of Dried sugar beet pulp as a root substitute is well  
 established as a result of many years experience on the Continent,  
 in America, and, over fewer years, in this country. So used it is  
 fed in comparatively large quantities after previous soaking. It  
 is advised that the material be soaked 10—12 hours before use in  
 three to four times its own weight in water.

Comparing the starch values of dried sugar beet pulp with those  
 of the root crops, it is possible to arrive at the amount of any of  
 the root crops which is the equivalent of 1 lb. of dried sugar beet  
 pulp.

Here are the comparative starch values :—

Dried Sugar Beet Pulp..	..	..	65.5 (Woodmans).
Mangolds	..	..	7.5
Swedes	..	..	7.0
Turnips	..	..	5.3

so that 1 lb. of dried sugar beet pulp may be assumed for feeding  
 purposes the equivalent of about 8 lbs. of mangolds, of about 9 lbs.  
 of swedes, and of about 12 lbs. of turnips, and in such proportions  
 it may be used to replace these roots in rations.

In all cases, whether used as a root substitute, or as a concen-  
 trate, it must be borne in mind that pulp represents a laxative  
 food, that its protein content is low, as is also its mineral content ;  
 particularly are these two latter points of importance calling for  
 special attention where the pulp is being used in the feeding of  
 dairy cattle and young stock.

For purposes of practical feeding dried sugar beet pulp and  
 molasses pulp are treated as one and the same thing, except that it  
 has to be recognised that the molasses pulp is rather more laxative  
 than the ordinary variety, and that it also adds more relish to the  
 ration and therefore stock will take it more readily. The ordinary  
 dried beet pulp has little taste and is thus not specially attractive  
 to animals, although it is not in any way unpalatable. The writer  
 has experienced practically no difficulty from cattle refusing to  
 take pulp. One case that did come to his notice turned on the  
 dumping before the animals all at once of double the quantity of  
 the soaked pulp that was called for, the animals being expected to  
 take to a strange food in large quantity right away ; this was

remedied by cutting down allowances and then making a gradual increase up to the full necessary amount—which was half that it was actually attempted to start with—and the cows were soon relishing beet pulp, as any other food. With pigs the writer has found some difficulty in getting them to take pulp under certain circumstances to be noted later.

Whether or not dried beet pulp should be used as a concentrate or as a root substitute must depend altogether upon ruling circumstances and also on relative prices. Where roots are short and sugar beet tops absent, or in insufficient supply, then the farmer might find pulp a true standby as a root substitute, but he cannot afford to pay a big price for it as such. At to-day's values (November 1930) swedes showing a food value on the farm of 11/- per ton, dried sugar beet pulp, since it is worth nine times the value of swedes for feeding, is worth up to about £5 per ton as a root substitute, that is delivered to the buyer's station, the carting of the pulp from the station balancing the carting of the roots from the field, and of course, both are to prepare for feeding, the one to trim and chop and the other to soak.

Thus at the prices prevailing under the grower's option clause (£5 per ton delivered, with certain rebates) the pulp is worth while considered as a root substitute, but at open market price £5 15s. delivered, the material would in most circumstances not prove to be an economical proposition.

Considered as a concentrate, dried beet pulp must compare favourably with barley and maize meals. At present prices (Nov. 1930) beet pulp compares favourably with barley and maize meals, as follows :—

		Price per ton.			Price per unit of Starch Value.	
		£	s.	d.	s.	d.
Dried Beet Pulp (grower's option)	..	5	0	0	1	4½
" " " (open market)	..	5	15	0	1	6
Maize Meal	.. .. .	6	0	0	1	7
Barley Meal	.. .. .	7	10	0	1	9

but it does not compare so favourably with the home-grown feeding barley grain, or with foreign barley grain or with maize grain, the prices of which rule as follows :—

					Price per ton.		Price per unit of Starch value.	
					£	s. d.	s.	d.
Maize	..	..	..	..	4	11 0	1	0
Feeding Barley	..	..	..	..	5	5 0	1	4
Imported Barley	..	..	..	..	3	10 0	11½	

Where the farmer has means of grinding his grain these prices represent a better proposition to him than does beet pulp.

It is on similar lines to these that the farmer must in any season assess the economic possibilities of beet pulp. It is not forgotten that the beet growing farmer, if he is to exercise his option on beet pulp must buy "forward," and that at a long date forward, and thus he is not really in a position to exercise judgment on the lines described. Unless cereal prices slump even more outrageously than at present, beet pulp at grower's option price will remain a fairly cheap food, and well worth the beet grower stockfeeder's while. When it is coming to hand in the autumn it will then be necessary for the farmer to decide in which use, as a concentrate or as a root substitute, it represents the better value to him. In saying what has been said in this paragraph the writer by no means implies that in view of the comparative prices of cereals there is no case for a reduced price for pulp, emphatically he thinks there is, and suggests that the price of pulp should bear some sliding scale connection with the price of barley and maize.

Dried sugar beet pulp is undoubtedly primarily suitable for cattle and sheep feeding, in which cases it can be fed at will as a root substitute or as a concentrate, and its bulky nature is helpful rather than otherwise. Woodman notes some difficulty with sheep, occasionally, owing to their greed for the food, which may often result in choking. This presents a difficulty where large quantities are being used as a root substitute, since in the case of sheep, convenience may seem to dictate the use of pulp in the dry state. However, from the point of view of its nutritive value, and because of the possibility just referred to, it is certain that pulp will be better fed soaked to sheep if it must be fed in large quantity, or otherwise it should be fed in more moderate quantities, as a concentrate, well mixed with other foods.

Johnson and Rayns note in their paper their considerable use of beet pulp in bullock fattening rations, and they give some figures and some notes relative to some trials carried out by them as to the comparative value of dried beet pulp and swedes and mangolds for bullock feeding purposes. The following table extracted from their paper sets forth some results :—

	LIVE WEIGHT.						INCREASE.				DEAD WEIGHT.		
	Beginning.			End.			Total		per day.		Total	per cent.	
											(st. of 14lbs.)		
	cwt.	qr.	lbs.	cwt.	qr.	lbs.	cwt.	qr.	lbs.	lbs.	sts.	lbs.	of L.W.
Pulp fed	7	2	24	10	2	5	2 <sup>1</sup> / <sub>2</sub>	3	9	2.46	46	.1	54.6
Roots fed	7	1	23	10	1	3	2	3	8	2.45	45	.1	54.8

The authors of the paper note that a small point in favour of pulp that struck them was its dependability, meaning to say that the increase in live weight in the case of the pulp fed animals was regular as compared with the rather erratic progress of those getting roots or sugar beet tops.

In connection with the carcasses resulting from the trial feeding, the results of which are noted above, the experimenters note that the only possible distinction was the slightly whiter fat of the pulp fed animals, and on sampling they found the meat to leave nothing to be desired, and they assert that there need be no fear of injuring the quality of the carcass by the use of pulp. The readers of the paper observe that as a result of three years' feeding trials with dried beet pulp, they have no reason to challenge the accepted ratio of 1 ton of dried pulp being equal to 7-8 tons of mangolds.

The following are two rations recommended by the writer for the feeding of fattening bullocks this (1929-30) season. In the one case the pulp is used as a root substitute, in the other as a carbohydrate concentrate :—

- (a) Pulp fed as root substitute, the pulp to be soaked for half a day prior to use.

Per head per day at commencement of fattening—

Pulp (weighed dry)	..	..	..	..	10 lbs.
Seeds hay	..	..	..	..	7 lbs.
Straw	..	..	..	..	<i>ad lib.</i>
Decort. ground nut cake	..	..	..	..	1 lb.
Beans $1\frac{1}{2}$ lbs. or Egyptian Cotton Cake	..	..	..	..	2 lbs.

If seeds hay should not be available, an extra 1 lb. of Decort. ground nut cake should be added, and the animals will eat more straw.

A total of 1 to  $1\frac{1}{2}$  lbs. of cereal meal should be added at twice as the fattening process proceeds.

- (b) Beet pulp fed dry as a concentrate (the pulp to be mixed well with the other concentrate foods).

Per head per day at commencement of fattening—

In addition to the basal ration of say 70-80 lbs. of roots and straw *ad lib*, the following concentrate ration :—

Egyptian cotton cake 2 lbs. or beans	..	..	..	$1\frac{1}{2}$ lbs.
Decort. ground nut cake	..	..	..	1 lb.
Beet pulp	..	..	..	3 lbs.
Maize meal	..	..	..	1 lb.



Should good "seeds" hay be available, the 7 lbs. of hay would cut out the need for Decort. ground nut cake, but if this was done the pulp should be reduced by about half and equal quantity of maize be added. As fattening proceeds a total of 1 lb. of cereal meal should be added at twice.

Dried beet pulp is also particularly useful in the feeding of dairy cattle, properly used in a balanced ration. Its mild laxative action appearing to suit dairy cattle particularly well. The Americans, according to Garner, reported by Woodman, praise its laxative and cooling effect when fed to dairy cows, and moreover they appreciate the fact that it "lightens" the heavy concentrate mixtures fed to heavy milkers, this resulting in the digestive juices mixing more thoroughly with the constituents of the ration and thus leading to more efficient digestion. It is to be noted where pulp is used in the feeding of dairy cattle that if the molasses variety is used, the presence of molasses may give rise to the same taint in milk as do sugar beet tops, and thus similar precautions will be necessary in its use. Practical observations have been made to the effect that the effect of pulp on butter fat is to make it unduly white.

The following rations have been advised in the case of dairy cows :—

A. Maintenance ration, 12 cwt. cow (Lincolnshire Red Short-horn).

8 lbs. Dried beet pulp, fed after previous soaking.  
10 lbs. "seeds" hay.

B. Production ration.

Mix up and feed dry at the rate of  
3½ lbs. per gallon of milk.

Beans	4 parts by weight or	Egyptian			
cotton cake	.. ..	.. ..	7 parts by weight.		
Oats or wheat	.. ..	.. ..	2	"	"
Sugar beet pulp	.. ..	.. ..	2	"	"
Decorticated ground nut cake	.. ..	.. ..	1	"	"

Pulp is well suited to the feeding of all classes of young cattle, and the following are examples of rations that have been recommended and used.

Calves, weaned at 3—4 months, per head per day—

Dried beet pulp soaked	.. ..	2½ lbs.
"Seeds" hay	.. ..	6 lbs.

Plus  $1\frac{1}{2}$  lbs. of the following mixture of concentrates—

Linseed cake	..	..	..	..	1	part	by	weight.
Crushed oats	..	..	..	..	3	parts	by	weight.
Decort. ground nut cake	..	..	..	..	2	"	"	"
Fish meal	..	..	..	..	$\frac{1}{2}$	"	"	"

The daily allowance being slightly increased as the calves make progress.

If it were preferred to use the pulp as a concentrate in a case where roots were available, a little dry pulp might be introduced into the concentrate mixture, say add 1 part of pulp and a further  $\frac{1}{2}$  part of Decorticated ground nut cake.

Young Cattle, 8—12 months old :—

About 5 lbs. of pulp (fed soaked) per head per day might be used with good straw *ad lib*, as the basal ration, to this a good concentrate mixture would be added in adequate quantity. Where it is desired to use pulp as a concentrate, it might be added to a concentrate mixture as follows :—

Beans	..	..	..	..	3	parts	by	weight.
Oats	..	..	..	..	3	"	"	"
Beet pulp	..	..	..	..	1	"	"	"
Decort. ground nut cake	..	..	..	..	3	"	"	"

using this mixture in conjunction with a basal ration of roots and straw.

The above concentrate mixture might be used in conjunction with the foregoing basal ration—where pulp is used as the root substitute, but in this case barley or maize should be substituted for the pulp of the concentrate mixture.

Young Stock, 12 to 18 months old :—

A basal ration of 6 lbs. of dried beet pulp (fed soaked) and straw *ad lib*, would be suitable, with a little concentrate mixture as required. A suitable concentrate mixture would be one as follows :—

Beans	..	..	..	..	2	parts	by	weight.
Oats	..	..	..	..	1	part	"	"
Decort. ground nut cake	..	..	..	..	3	parts	"	"
Maize or barley	..	..	..	..	$\frac{1}{2}$	part	"	"

Where roots were available and it was desired to use pulp as a concentrate, the maize or barley of the above ration might be substituted by pulp.

Dried beet pulp may be quite usefully fed to horses. The writer has usually adopted the advice tendered in a pamphlet

issued by Sugar Beet Products Ltd., which deals with dried beet pulp as a feeding stuff, and has suggested the substitution of a mixture of beans and pulp in the proportion of 1 to 2, in the replacement of an equal quantity of oats. The total amount of pulp fed not to exceed 5 lbs., the material to be fed dry. At the present time (November 1930) this substitution represents an economy, since oats are comparatively dear, while beans are very cheap and beet pulp relatively cheap. It is important that the maximum quantity of pulp mentioned should not be exceeded or real trouble may be experienced. It must not be forgotten that pulp swells very much in contact with water, taking up much of the fluid, now if this action has not taken place outside the animal, it will do so inside, and while moderate amounts of pulp in the dry state appear to be quite harmless, if excessive quantities are used, then trouble is likely, at any rate, this is definitely so in the case of the horse, and there must always be the possibility of it occurring in the case of other animals, the ruminants being the less likely to disturbance. One would expect the pig to be particularly likely to meet trouble from pulp fed in the dry state, but the writer has fed up to 40% of the ration in the form of dry pulp in the dry state, and he has experienced no trouble. However, he has met with cases of trouble in horses from this very cause, and they have proved serious cases indeed. In one case the horseman found his animals to relish the food very much, and thinking to indulge them, went to the trouble of stealing supplies for them, and fed them with pulp more or less *ad lib*, with the result that the vet. was soon in attendance, and the horses had to be "sat up" with for several nights.

The following is a mixture advised by the writer in a certain instance for the feeding of work horses. The mixture to be made up and fed dry in such quantity as was thought necessary :—

Oats	..	..	..	..	..	1	part by weight.
Barley	..	..	..	..	..	1	" " "
Maize	..	..	..	..	..	$\frac{1}{2}$	" " "
Dried beet pulp	..	..	..	..	..	$\frac{1}{2}$	" " "
Bran	..	..	..	..	..	1	" " "

Johnson and Rayns note that they have replaced corn by pulp in the feeding of horses in the proportions of 4 lbs. of grain replaced by 5 lbs. of pulp, soaking the pulp before use. They talk of allowances of 5—6 lbs. of pulp and note that the animals will eat molasses pulp very readily in the dry state, but often refuse the ordinary dry pulp.

In the case of pigs the writer originally considered the material

unsuitable because of its bulky and rather fibrous nature, and on these ideas he tendered advice against its use to numerous pig keeper enquirers. However, in view of the persistent requests for advice and in the absence of much precise information, it was decided to conduct experiments to test the point—or rather, it was thought to demonstrate the unsuitability of pulp as a feed for pigs. Where feeders were determined to use pulp in pig feeding they were always advised to soak the material before use, and in the initial experiment undertaken by the writer the pulp was originally fed soaked, but during the course of the trial a change had to be made, for the pigs refused to consume the soaked pulp and they made but moderate progress while on it. The pigs were changed over to the dry method of feeding, the pulp being mixed with the meals and fed dry. Under this method the pigs consumed the pulp quite readily, there was never a sign of trouble, and the animals made good progress, and in the end returned results very nearly as good as the Control (all meal) fed pigs. The amount of pulp fed in the ration in this case was 20%, and it replaced an equal quantity of barley meal in an ordinarily well balanced ration of meals such as was used in the feeding of the Control pen. The pigs were, of course, being prepared for the butcher. The quantity of pulp used followed advice tendered in the pamphlet already mentioned, issued by Sugar Beet Products Ltd., where it is suggested that 15% of pulp should be the limit for pigs up to three months old, and 20% the limit in the case of older pigs. The substitution of pulp for barley, weight for weight, was decided upon after a careful consideration of Kellner's figures of the composition of these two foods, it being then realised that beet pulp would hardly be the equivalent of barley, but the comparative figures, all points taken into consideration, were considered sufficiently close to justify the course adopted. (Woodman's work with beet pulp had not been published when this work was commenced, and therefore his figures and results were not then available.)

The result of this first experiment caused a hesitation in the views held by the writer relative to the use of beet pulp in pig feeding, and led to the carrying out of a further trial on similar lines to the first, except that the pulp was fed dry from the start. Throughout this trial, both pens of pigs did well and at no time was any trouble experienced. The following figures are the essential results of the trial. (The complete results are published in a separate Report from the Kirton Agricultural Institute and Experi-

mental Station, and it is from this Report that these figures are extracted.)

	Initial L.W. per pig. lbs.	Final Fasted L.W. per pig. lbs.	L.W. Gain per pig lbs.	D.W. per pig lbs.	Cost of Food per lb. of L.W. Increases. pence.
Control . . .	55½	234½	179½	176½	6.89d.
Receiving Pulp	56½	229	172½	167	5.96d.

N.B. The experiment was conducted in early 1928, when barley meal was costing about £10 to £11 per ton and beet pulp (grower's option) £5 per ton.

These results forced the writer to accept the view that dried beet pulp represented a useful material for use in the fattening of pigs, the material being fed in the dry state, and in quantity, not more than 20% of the ration.

A subsequent experiment was undertaken to test the maximum quantity of pulp that could economically be used in the fattening of pigs; nil, 20%, 30%, and 40% of pulp was included in rations fed respectively to each of four pens. The results showed conclusively that 20% of pulp represents the maximum economic quantity of pulp that can be used in pig feeding. The pens getting 30% and 40% of pulp fell a very long way behind the others, they tended to sort out the pulp and to waste it. It is to be noted that at no time was any trouble experienced in any pen, thus obviously pulp may be quite safely fed dry to pigs. The writer now recommends the use of from 15% to 20% (according to the age of the pig) of dried beet pulp in rations for pigs, care being taken that the ration is well balanced. The pulp should be introduced in place of barley or maize meal, and if the prices of these feeds are high, pulp may represent a sound means of reducing feeding costs. With pulp and barley meal at anything like similar prices the writer would prefer to use barley meal rather than dried beet pulp. Where pulp is used in pig feeding it should be used on the dry system of feeding. It is necessary to introduce pulp to pigs quietly, starting with very little and gradually increasing the quantity.

The following are examples of food mixtures that have been recommended by the writer:—

**Weaners.** Start with very little pulp and gradually bring into the following mixture—

Dried Sugar Beet Pulp	..	..	1½	parts by weight.
Barley Meal	..	..	2½	" " "
Pollards	..	..	4½	" " "
Linseed Cake Meal	..	..	½	part " "
Fish Meal	..	..	1	" " "

This mixture may be used for suckling sows.

*Fattening Pigs.* 3—5 months.

Fish Meal .. ..	1 part by weight.
Sharpes .. ..	2½ parts by ..
Barley Meal .. ..	4½ " " "
Dried Sugar Beet Pulp .. ..	2 " " "

*Fattening Pigs.* Finishing.

Fish Meal .. ..	½ part by weight.
Sharpes .. ..	2½ parts " "
Barley Meal .. ..	5 " " "
Dried Sugar Beet .. ..	2 " " "

Fish meal should be cut out about a month before the pigs go to the butcher.

Woodman, French and Duckham have done some interesting work in the feeding of pulp to pigs, the paper recording the results of which has already been referred to. The investigators found beet pulp to be very highly digestible in the case of the pig, and therefore apparently highly useful as a carbohydrate food for use in pig feeding. In practical feeding trials, these digestibility trial results were discounted, the pulp fed pigs doing poorly in comparison with the control animals, making in all cases a very, very much smaller live weight gain and showing consistently a much higher consumption of food per lb. of live weight gain than in the case of the control pens. In these trials the pulp was fed after soaking and no trial was made where pulp was fed in the dry system. Reporting on one pulp fed group, the investigators say that difficulty was experienced during the first week in getting the pigs on to the pulp containing ration--some pigs showed a tendency to scour. Later the pigs consumed the food with greater zest, though their skin and hair became progressively dirtier and duller. At the end of seven weeks the condition of the animals was so unsatisfactorily that the beet pulp was omitted from the ration, and the pigs were put on to a similar ration to that fed to the control pigs, and within a week they were showing obvious improvement.

As a result of their work the investigators observe, while pointing out that pigs can digest beet pulp to an extent very little inferior to that to which ruminant animals are able to digest it, that owing to the bulkiness of the material after soaking in water, satisfactory consumption of the material cannot be got and the pigs cannot make the best of the food. The result of its use is to depress the rate of live weight increase. The investigators suggest, however,

that there seems no reason why it should not be used in moderate quantities as a food for breeding stock, or for pigs which are not being fed to their maximum appetite with a view to obtaining early maturity.

The writer has acquaintance with very many pig feeders who have used beet pulp on the lines suggested by him and who have found the material most useful, and whose pigs have done well and satisfactorily, and who are certain always to use beet pulp when its price compares favourably with barley meal.

The writer has no experience, and has no information relative to the value of pulp as a poultry food, but he would expect it to show itself of good value in this direction, properly used in a well balanced ration.

It now only remains to discuss the residual manurial value of dried sugar beet pulp. In "Notes on Feeding Stuffs," Journal of the Ministry of Agriculture, October 1928, Woodman assesses, at the then prevailing unit values of Nitrogen, Phosphate and Potash, the manurial value of pulp containing 10% of moisture, at 9/- per ton, and the manurial value of Molasses pulp, 10% moisture, at 12/4 per ton. Since the unit values of manurial constituents are now lower, these figures must now rate lower, and in a recent issue of the Journal of the Ministry of Agriculture (November 1930) in "Notes on Feeding Stuffs," the manurial value of ordinary pulp is given as 7/- per ton.

In Bulletin No. 156B, issued by the University of Leeds, the following figures relative to the manurial ingredients in lbs. per ton of food are given :—

Nitrogen	..	..	..	..	29
Phosphoric Oxide	..	..	..	..	5.5
Potash	..	..	..	..	9

Molasses beet pulp is much richer than the ordinary variety in potash.

These figures allow of the direct calculation of the numerical value of pulp at any time according to current unit prices of Nitrogen, Phosphoric Oxide and Potash.

In a final word, the writer would like to pay his own tribute to the excellent work on Sugar Beet Tops and Sugar Beet Pulp, done by Dr. H. E. Woodman, at Cambridge. This work has been done with extreme thoroughness, and the results obtained are of very great value and use in the practical feeding of these by-products.

V.—SEALE-HAYNE AGRICULTURAL COLLEGE. NEWTON  
ABBOT, DEVON.

*D. R. Edwardes-Ker, O.B.E., M. A. (Oxon.), B.Sc.,  
Principal.*

The Seale-Hayne Agricultural College is the youngest of the residential Agricultural Colleges in this country, the buildings having been completed immediately before the outbreak of war in 1914. During the war years the college buildings, which had not been opened as an agricultural college, were occupied by the War Office.

The first courses for agricultural students commenced in January 1920, when fifty-five students attended the college. Since that date numbers have steadily increased, and the whole of the residential accommodation has now been full for several years, the number of students varying between seventy and eighty. Men students only are accepted at present, and it is not possible, at this juncture, to say whether students of both sexes may be admitted at some future date. A separate hostel would in this case be necessary.

The College buildings are particularly well built, and it has been said that they constitute one of the best brick buildings in the West of England. Of Torquay brick and faced with Portland Stone, the buildings are in the form of a quadrangle, with a grass lawn in the centre, and situated in a commanding position, 400 feet above sea level, in sight of the River Teign and the English Channel on one side and the uplands of the Forest of Dartmoor on the other. The climate, owing to this elevation, is bracing.

Students occupy private bed-sitting rooms, which are arranged in four independent blocks. The Dining Hall is spacious and oak-panelled, and contains a number of oil paintings of ancestors of the Rt. Hon. Charles Seale-Hayne.

A few words as to the Founder may be of interest. Mr. Seale-Hayne came of a good old county family, the name of Hayne constantly cropping up in connection with the past history of Devon. Several former Members of Parliament for Dartmouth were ancestors of Charles Seale-Hayne, and in numerous records the family name appears as having been held by Sheriffs, Colonels of Militia, and Justices of the Peace, as far back as the reign of the second Charles.



The Founder of Seale-Hayne College was born at Brighton in the year 1833, and his father, Charles Hayne Seale-Hayne, was the second son of Sir John Seale, first Baronet, M.P. for Dartmouth. Mr. Seale-Hayne was educated at Eton, and called to the Bar in 1857. He was Justice of the Peace for the County of Devon and the Borough of Dartmouth, a member of the Reform Club, the National Liberal Club, the Devon Chamber of Agriculture, and vice-president of the Devon County Agricultural Association. On five occasions he was returned as Member of Parliament for the Mid or Ashburton Division of Devon, in 1885, 1886, 1892, 1895 and 1900.

The present Seale-Hayne College, which was built after the Founder's death in 1903, stands in the old Division which Mr. Seale-Hayne represented and where he owned Kingswear Castle and Pitt House, Chudleigh. The residue of his estate was left to found and endow the Seale-Hayne Agricultural College, the buildings of which were completed, as stated above, in 1914, upon the Howton estate, which had been purchased for the purpose. Mr. Seale-Hayne's motto, "*In caelo salus*," is a good example of a punning motto, and the College also bears his coat of arms.

The governing body of the College consists of the Rt. Hon. George Lambert, M.P., who is the permanent chairman; Mr. E. C. Perry, J.P., who was for many years Mr. Seale-Hayne's parliamentary agent, is deputy-chairman; while the remaining 14 governors include many gentlemen who are prominent in the South-West of England, as well as being, in several cases, highly successful farmers. Devon has three representatives on the governing body, and Cornwall three, while the representative of the Ministry of Agriculture is Sir Francis Dyke Acland.

The present Principal of the College was appointed in July 1919, and was responsible for starting the College as a centre of agricultural education for which purpose it was founded.

The College courses are seven in number, and consist of the following :—

1. The Degree course for the London B.Sc. in Agriculture, extending over three or four years.
2. The College Diploma course in General Agriculture, extending over three years.
3. The College Certificate course in the General Science of Agriculture, extending over two years.

4. The Poultry Certificate course in General Poultry Husbandry, extending over one year.
5. Two terms' winter short course in the science of agriculture, extending over 20 weeks.
6. Summer Dairying short course, extending over 12 weeks.
7. The farm pupil course in Practical Farming, on the College Farm.

A feature is made at the Seale-Hayne College of the necessity of a good practical knowledge of farming before a scientific course is undertaken. It is the policy of the College to ensure that no student shall take one of the scientific courses unless and until he has a fair knowledge of general and practical routine. Many students who enter the College have considerable practical knowledge, and in some cases have spent four and even five years in practical farming. Other students, who enter direct from school, are generally required to spend a full year on the College farm in the Farm Pupil course, thus ensuring that they have a fair working knowledge of the farmer's year, and the routine of seasonable operations on a typical mixed farm.

The staff of the College consists of twenty-one members, of whom fifteen are administrative and instructional, and six are advisory and research officers established under the scheme of the Ministry of Agriculture. These research officers include an advisory chemist, entomologist, mycologist, economist, and veterinary surgeon, all of whom are mainly concerned with the investigation of problems in connection with their various departments, in the South-West province of Devon and Cornwall. The latter county includes the Scilly Islands, in connection with whose bulb-growing the mycologist and entomologist are very closely concerned.

The work of the students consists of lectures daily from 9 to 1, on all working days of the week, and lectures or practical work during the afternoons, excepting Wednesdays and Saturdays, which are given up to games in the afternoon.

The vacations are about three weeks at Christmas, three weeks at Easter, while the long vacation extends from mid-July until the commencement of October. Students are generally expected to take the opportunity of putting in time on farms in other parts of the country during the long vacation, in order to gain experience of systems of farming other than those practised in the South-West.

The students control their own social and athletic activities by means of their Union Club, and Rugby and Association Football, Cricket and Lawn Tennis teams have regular matches, while a four-oared boat is kept by the College Rowing Club on the River Teign. The College crew won the Borgnis Challenge Cup at Marlow Regatta in 1929. There is also a Boxing Club.

An interesting feature of the students' work is a Students' Agricultural Discussion Society, which meets on the average once a month, papers being read on specified agricultural subjects by senior students, a discussion then following. It has been found that not only does this Society stimulate interest on the part of the students generally, but a valuable opportunity is also given to them in public speaking.

The College Farm is provided with new buildings, which have been erected since the College started in 1919, and comprise three cow sheds, food-preparing block, granaries, cake stores, open yard, pig styes and slaughter house, in addition to the farrier's shop, carpenter's shop and the power house, which adjoin the farm buildings proper. The cowsheds are provided with concrete floors and tubular fittings, and are designed on the most modern lines. Milk production is the speciality practised on the farm, and Seale-Hayne College was the first agricultural college in this country to obtain a licence for the production of Certified milk. The cows, which are of the local South Devon breed, are of a good dairy type, are milk-recorded, and milked thrice daily. The average yield per head is high, the annual yield for 1929-30 being 1,005 gallons per cow, which is the highest record of the local Milk Recording Society. There are six cows in the College herd giving over a thousand gallons a year, and one cow in 1929-30 gave six gallons short of 2,000 gallons. This cow, "Foreman III," has secured considerable show successes for the College; for example, at the London Dairy Show in 1928 she won the milking trials, the butter tests, the Spencer Cup, the National Butter Challenge Cup, and was reserved supreme champion. As this was the first time that an animal of the very local South Devon breed had secured such high honours in public competition, considerable interest was taken in the cow's successes. It may be stated that since that date she has on several occasions given over ten gallons of milk per day. The successes of "Foreman III," in conjunction with the remarkable wins of another cow from a neighbouring farm, at the London Dairy Show this year, is evidence that the South Devon breed is capable of

producing the very highest results in production both of milk and butter.

Two breeds of sheep are kept on the farm, a registered flock No. 895 of Suffolk sheep, and registered flock No. 236 of South Devons. Fat lambs of the latter breed have been very successfully shown by the College at various fat stock shows, including Smithfield.

The pigs kept on the farm are females of the Large Black, Middle White, Berkshire and Long White Lop-eared breeds, which are crossed with a Large White boar for bacon purposes. The farm provides the College with Certified Milk, and home-killed mutton and pork.

The Poultry Department has been recently remodelled on very up-to-date lines, and occupies five acres immediately adjoining the College. The head of stock will be worked up to a total of 1,000, and White Wyandottes, White Leghorns, Rhode Island Reds and Light Sussex are the breeds kept. The Poultry Department is approved by the National Poultry Council for the purpose of the National Diploma in Poultry Husbandry.

The College Dairy is situated about 100 yards from the main buildings, and at the present moment is being considerably enlarged, when it will be one of the best educational dairies in the country. About 250 gallons of milk are employed daily for the instruction of students in hard and soft cheese making and the correct method of preparing Devonshire cream. Separated cream from Cornwall is employed for purposes of butter making, while students also receive instructions in a profitable dairy side-line, viz., ice-cream making. The several students of the College who were entered in the butter-making tests at the Bath and West Show at Torquay, in June 1930, were very successful, and the championship prize at the Show was won by a twenty-year-old Seale-Hayne student.

The College estate, which actually surrounds the College buildings (a point of very great importance from the educational point of view) consists of 340 acres, of which about three-quarters is down to grass, and one-quarter under the plough. There are also 25 acres of woodland, and a Forest Nursery of 2 acres, and students receive lectures and practical instruction in forestry.

The soil of the farm is not, on the whole, good, but is rather difficult of management, being a medium loam, overlying the Devonian shales, which is locally known as "shillet." There are

isolated patches of Devonian limestone and igneous greenstone on the northern portion of the estate. This soil is somewhat catchy in nature, which, from a point of view of instruction, is a good thing, as the importance of weather conditions is thus impressed upon students more than would be the case on an easily worked farm. The usual four-course rotation, or a slight modification, is practised on the arable portions, the root crop consisting of mangolds, a small acreage of sugar-beet, and marrow-stem kale in place of swedes and turnips, which latter are not at all successfully grown on the farm.

Several field experiments and trials are in progress, notably a small holding of 25 acres demonstrating the possibility of employing modern intensive methods of grass land management for milk production. A number of two-acre plots are treated and grazed successively by a dairy herd of fifteen cows, housed in a separate cowshed and milked thrice daily. A portion of this experiment is cut to hay annually, but a certain amount of artificial foods have to be purchased. Careful costs are kept of this experiment.

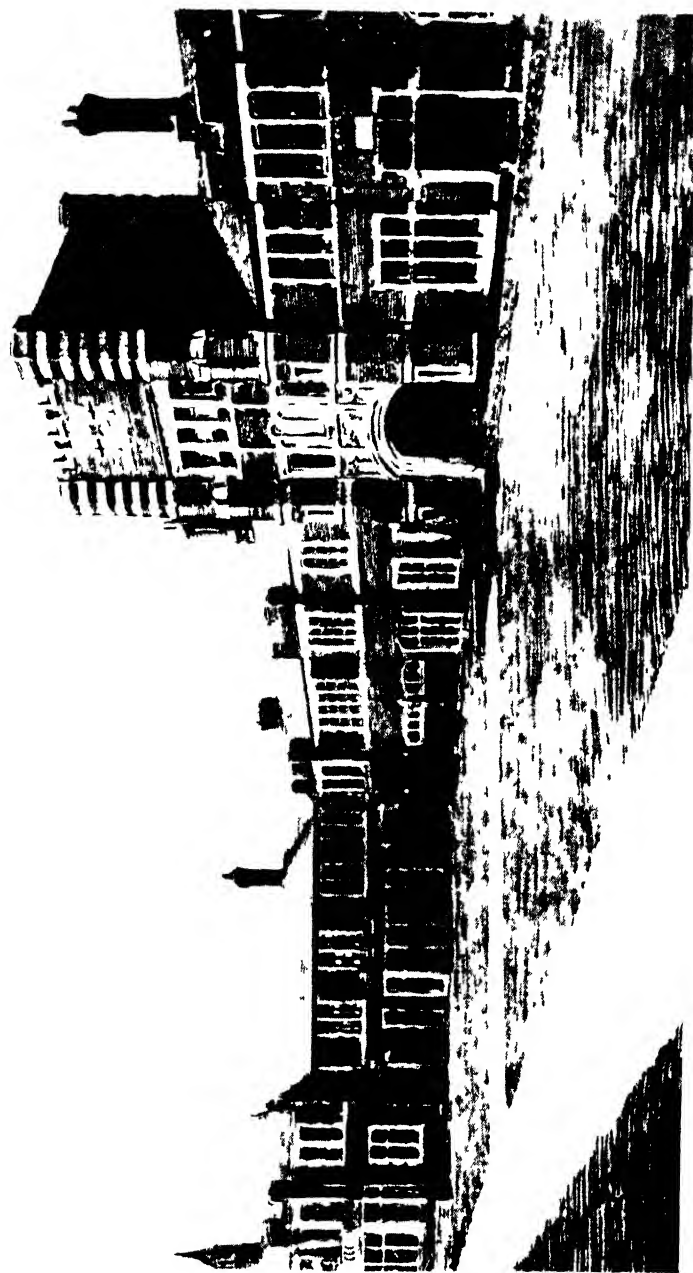
Work on the feeding of pigs is also carried out from time to time, while broccoli breeding, pyrethrum growing, and trial plots of bulbs are established.

The successes of students have been very gratifying; twice the first place in honours and the Stephens' Memorial Medal were won at the N.D.D. examination by Seale-Hayne students, while the first place in honours of the N.D.A. was a few years ago taken by a student who had received about half his instruction at this College. About ten students obtain the N.D.A. per year, and three or four the N.D.D.; one or two generally take the intermediate examination of the Surveyors' Institution, while three or four per year pass the Inter B.Sc. and B.Sc. The B.D.F.A. butter-making certificate is obtained by about ten students annually. The success of students after leaving has also been marked, and while quite a number farm in this country, it must be admitted that at least an equal number are at the present taking up agricultural positions abroad. Several Seale-Hayne students have obtained Agricultural Inspectorships in the Colonies, under the Colonial Office scheme, while many students are successfully engaged in tea planting, rubber growing, and other branches of tropical agriculture.



SEALE HAYNE COLLEGE THE SOUTH FRONT

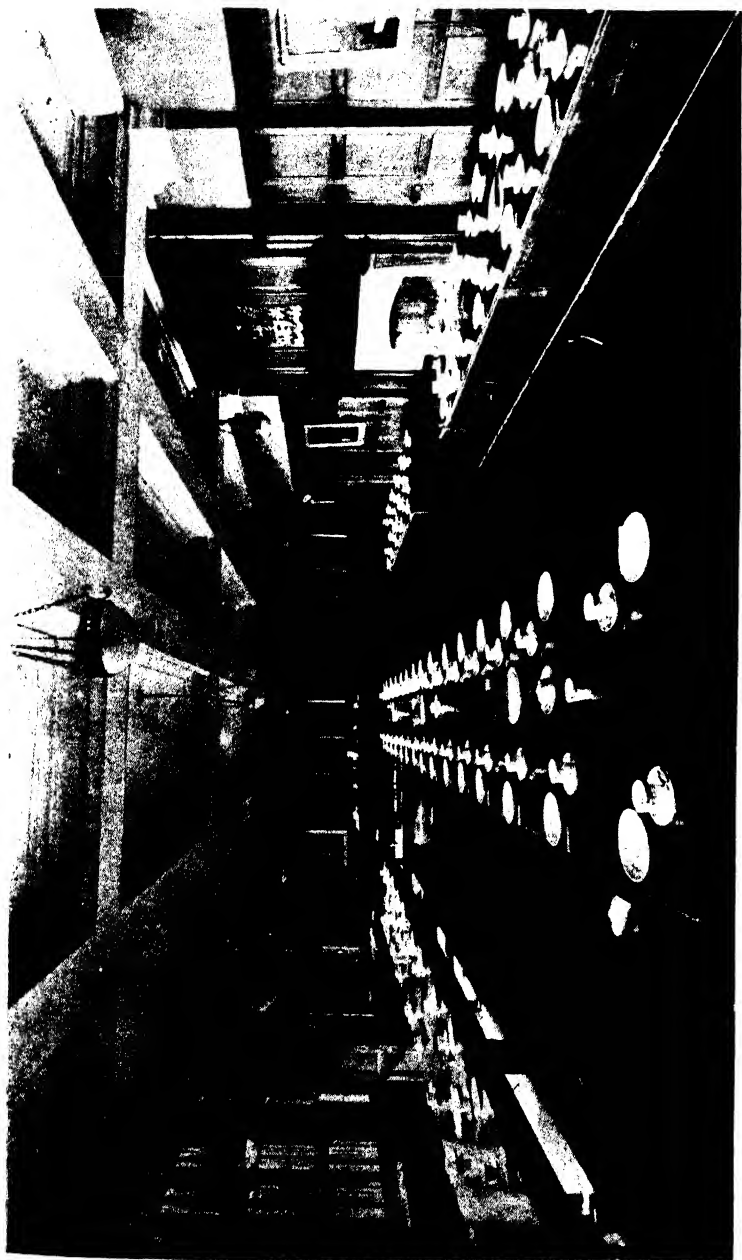




SPALDING COLLEGE THE QUADRANGLE







THE DINING HALL.





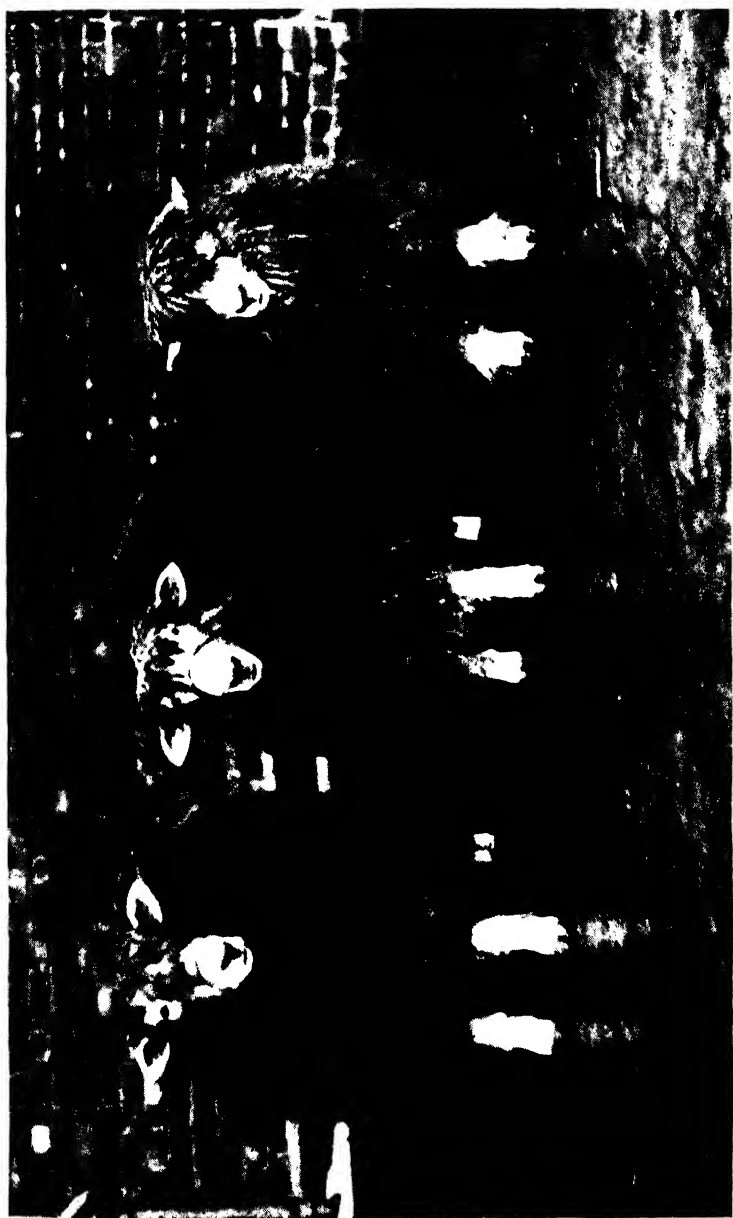
STUDENTS PRIZE WINNERS AT THE BATH AND WEST SHOW, 1930.





FOREMAN III 1st IN MILKING TRIALS AND RESERVE CHAMPION 1928 DAIRY SHOW





SOUTH DEVON PRIZE WINNING LAMBS





VI.—THE OPEN TANK PROCESS FOR ANTISEPTIC  
TREATMENT OF TIMBER FOR ESTATES,  
FARMS, COLLIERIES, Etc.

*By J. Bryan, M. Eng., A.M. I.C.E.  
Forest Products Research Laboratory.*

INTRODUCTION.

The satisfactory preservation of timber against fungal decay is largely dependent on maintaining an unbroken protective coating of preservative round each piece. Timber exposed to outdoor conditions is always liable to splitting or mechanical damage so that a superficial coating of preservative applied by brush, spray or dipping will not remain intact for any length of time, and the untreated wood soon becomes exposed to the attack of fungus. Thus it will be realised that to obtain satisfactory preservation a reasonably deep impregnation of the antiseptic must be obtained. This can be effected either by a pressure process or with certain classes of material by hot and cold open tank process described hereafter.

The pressure process is generally considered the most economic when there is a considerable quantity of timber to treat at one place. However, the majority of users of timber do not use sufficient to warrant the installation of a pressure plant and an open tank outfit, because of its low cost and the satisfactory results obtained with it, is the most economic proposition. This paper is intended to give an account of the open tank process for the information of Estate agents, farmers and others who are anxious to preserve their timber satisfactorily without incurring a large capital outlay.

THEORY OF THE OPEN TANK PROCESS.

Although this process is usually called a non-pressure process the impregnation is actually due to pressure differences caused by variations in temperature. A piece of wood in an air-dry condition will contain minute air spaces totalling about 50 per cent. of its volume. If this piece of wood is immersed in a liquid which is then heated, the air expands and a certain amount is driven out,

being treated. This has a minor disadvantage that the bottom layers of each charge receive a double treatment.

The process can be accelerated by having two tanks, one containing hot creosote and the other cold creosote. The timber is first immersed in the hot creosote for a period of one or two hours, after which it is immediately transferred to the cold tank where it remains for a further period of one or two hours. Although there is a saving in fuel there is extra handling of the timber and it is doubtful whether there is any great advantage over using one tank. Sleepers have been treated by this method by attaching them to a continuous chain which passes first through the hot tank and then through the cold. However, for this method the equipment required is more elaborate and probably in such cases a pressure plant would be more satisfactory.

The method of heating the tank will depend on circumstances. If steam is available either from a main or from a portable engine it will be found most convenient to heat the tank by means of steam coils laid in the bottom. In this case the coils should be protected by horizontal bars on which the timber rests. The exhaust end of the coils should be closed by a steam trap.

If steam is not available heating will have to be by fire. If the tank is erected on slightly sloping ground it can usually be found possible to have the fire under one end of the tank and the flue running right under the tank and up through a short chimney at the other end. Wood waste can be burnt and this is quite a satisfactory method of heating, although it is slower than steam and requires more attention and there is more risk of fire. Although with reasonable care this risk is small, it is advisable to have a fire-heated tank well clear of buildings, haystacks, etc. Figure V is a photograph of a steam-heated tank used for the treatment of mine timbers.

For the treatment of fence posts efficient results can be obtained by what is known as the "Butt Treatment." In this case the lower end only of the post is given an open tank treatment and the upper end is either brushed with, or dipped in, the creosote. Thus the portion of the post most liable to attack by fungus, *i.e.*, at and below ground level, receives the heavier treatment. All the apparatus required consists of an old iron drum which is capable of being heated by a fire underneath. Figure III illustrates a plant which has given satisfactory results.

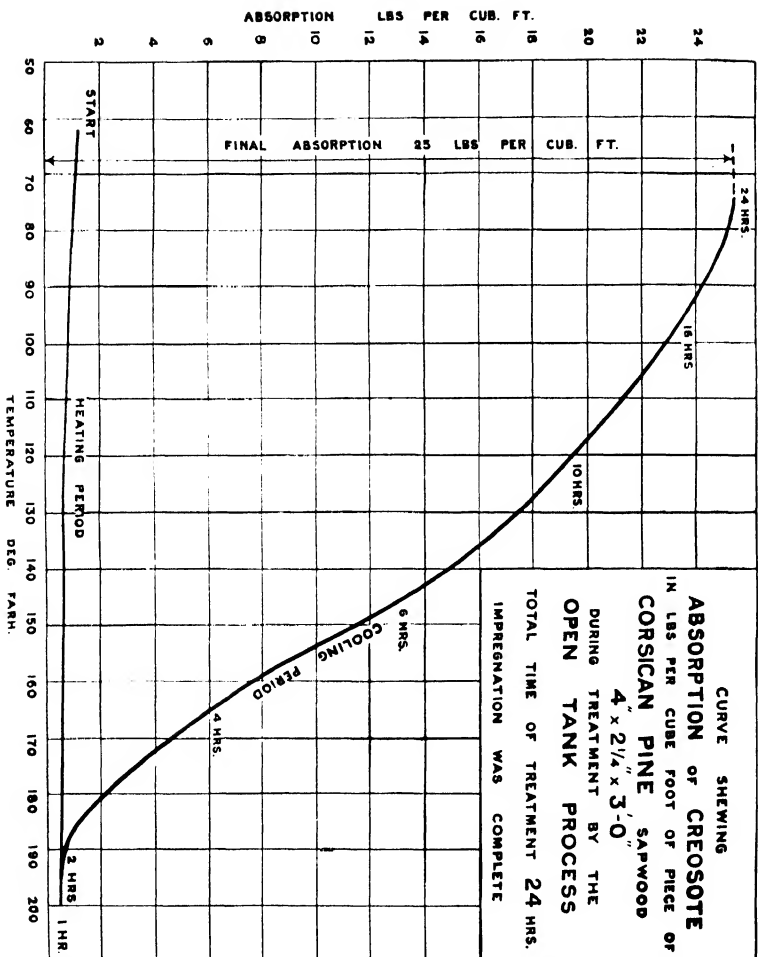


Fig. 1



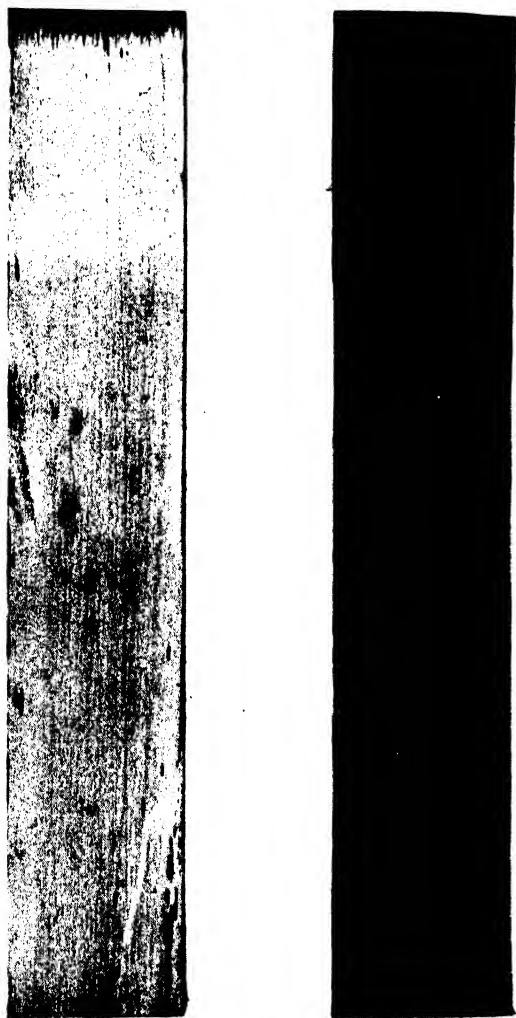


FIG. II.





FIG III.

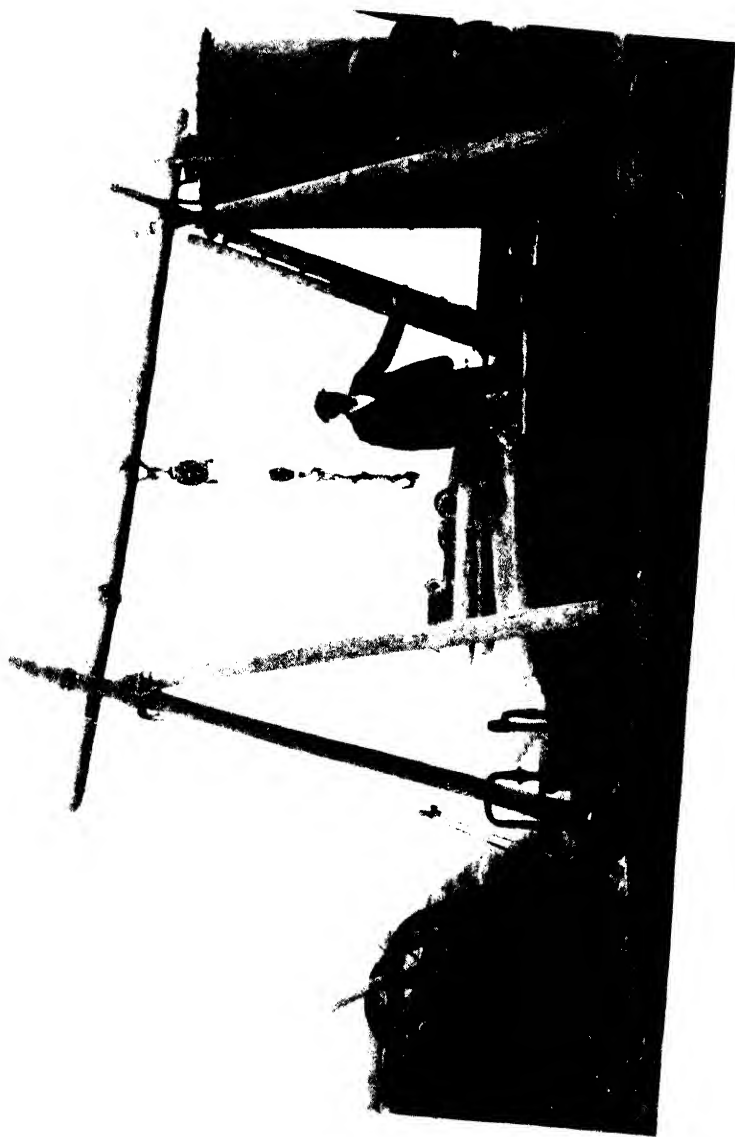






FIG. IV.







The posts are placed upright in the drum, the level of the creosote being just above the point on the posts which would be at ground level when erected. The treatment is the same as that described for the open tank process. During the treatment the tops of the posts are swabbed over with hot creosote. This plant is capable of treating only a few posts at a time, but for that reason is quite suitable for a number of people requiring small quantities of posts. It is essential that the drum be sound and that it be used with care so that leaks do not develop, causing a risk of fire. Sometimes a steel plate is placed in the bottom containing a number of short spikes sticking upwards. This facilitates loading the tank as the spikes help to keep the posts upright. If the output is not sufficiently great a larger tank may be used or the units multiplied. If a larger tank is used it should be divided into partitions to facilitate the immersion of the poles, and to keep them upright.

#### PREPARATION OF TIMBER FOR TREATMENT.

It is absolutely essential that timber should be well-seasoned before treatment by the open tank process. With green timber the inter-cellular spaces are filled with water, and since the coefficient of expansion of water is negligible compared with that of air, the expansion is very slight and the pressure difference causing absorption does not occur to any appreciable extent. Consequently the absorption is unsatisfactory and the depth of impregnation is small, and on drying out after treatment the timber splits, exposing untreated surfaces to the attack of fungus, whereas had treatment occurred after seasoning these splits would have been sealed with the preservative. For the treatment of posts in the round it is essential that the surface be cleaned of the outer and inner bark, the latter being particularly impervious to preservatives and, if left on, uneven impregnation results. Timber should be reasonably clean before treatment and free from dirt and surface water.

Cutting of timber after treatment should be avoided as much as possible, as thereby untreated surfaces may be exposed, and the value of the treatment is lost. Should cutting be unavoidable the exposed surfaces should be given two coats of the preservative liberally applied.

When cutting timber for fencing, etc., all the sapwood should be utilized, if it is going to be creosoted. Sapwood absorbs creosote readily and when treated has probably as long, if not a longer, life than the heartwood.

## RESULTS OBTAINED BY OPEN TANK PROCESS.

The results obtained by open tank process depend on the species being treated.

Scots pine and Corsican pine treat very well, and complete impregnation of the sapwood is easily obtained, as well as good impregnation of the heartwood.

Spruce and Douglas fir do not treat so well, the penetration being very irregular.

Larch is very difficult to treat, and the results obtained are very little better than those obtained by dipping only.

Beech treats very readily and complete impregnation of planks, 2 inches thick, can be obtained.

Elm treats fairly well.

The sapwood of oak can be completely impregnated, but there is practically no penetration into the heartwood.

Timber will not treat in a green condition, and it is absolutely essential that it should be seasoned before being treated.

Figure IV shews the results of the "Butt treatment" of Scots pine posts, about 5 inch diameter. These were treated for a length of about 2ft. 6in. and there was a radial penetration of creosote of 1 inch, and a total average absorption of 1 gallon.

Acknowledgement is made to Mr. R. S. Pearson, Director of Forest Products, for helpful criticism and advise and permission to publish this article.

VII.—REPORT OF EXPERIMENTS ON THE ERADICATION  
OF BRACKEN.\*

*By T. Wallace and A. W. Ling.*

In his book "Plants Poisonous to Livestock," Long<sup>(1)</sup> summarises the position of bracken in agriculture as follows: "(1) it is a most pernicious weed; (2) it forms an excellent litter for stock and treads down into good manure; (3) it is said to have been successfully converted into silage; (4) it has been accused of poisoning

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\* This Report will be published as a Bulletin of the Society.

cattle." There is ample evidence to support the first two contentions, but the one concerning the use of bracken as silage appears somewhat doubtful. As regards the poisonous properties of bracken, it has now been proved that certain species of bracken are poisonous, and in some cases with fatal results. The toxic principle appears to be cumulative in action and observations carried out in the West of England indicate that stock are more liable to bracken poisoning during a period of drought than in wet seasons.

An article in the *Journal of the Board of Agriculture* (March 1917) <sup>(2)</sup> deals with the use of bracken fronds and roots as a food-stuff. According to figures published at that time by the Government Laboratory, bracken root has an analysis as follows :—

					%
Moisture	..	..	..	..	12.4
Oil (ether extract)	..	..	..	..	1.6
Albuminoids	..	..	..	..	4.8
Carbohydrates	..	..	..	..	63.4
Of which Starch	30.5%				
And Sugar	0.7%				
Crude Fibre	..	..	..	..	12.8
Ash	..	..	..	..	5.0
Of which Sand	0.8%				
					100.0

It is stated that, in many parts of the world, bracken roots are eaten by human beings and it is claimed that the starchy material obtained from the roasted root will stave off the pangs of hunger better than most other foodstuffs. It is pointed out that the roots form a useful starchy food for pigs and the possibility of folding unringed pigs on bracken and allowing them to root out the rhizomes for themselves is discussed.

The initiation of experiments by the Experiments Committee of the Society on the eradication of bracken, "brakefern" or "Fern" (*Pteris aquelina* L.), and the improvement of poor acid pastures is fully described in Vol. XVI (Fifth Series, 1921-1922) of the Society's *Journal*<sup>(3)</sup>, and progress reports on the work have appeared in Vols. XVII<sup>(4)</sup>, XVIII<sup>(5)</sup>, XX<sup>(6)</sup>. The present report is a final one on the experiments. It summarises the main features of the previous reports, and describes results which have been subsequently obtained. These results include observations on the reappearance of bracken on land that has been allowed to revert after two or three seasons' treatment.



At the outset it was realised that if by suitable means the bracken could be eradicated and herbage improved, occupiers of hill land would be able to carry a larger head of stock on any given bracken area. On the other hand it is well known that some grass land farmers rely upon a certain amount of bracken for use as bedding for stock.

The experiments formed part of a larger investigation on the improvement of poor hill pasture\* and were designed to determine whether bracken could be eradicated economically by certain treatments, or at any rate so reduced as not seriously to affect grazing on land that was required for grazing purposes. At the majority of the experimental centres the bracken before treatment was of such height and density as to make the land useless for grazing.

The investigation had reference to three points, namely, (a) the eradication of bracken by means of cutting; (b) the eradication by means of manuring without cutting, and (c) the eradication by means of manuring and cutting.

The interim reports on the present experiments have shown that by systematic cutting of the bracken during June and July for two or three seasons, it could be so reduced as to make the land quite useful for grazing purposes. The report in the *Journal*, Vol. XVIII. 1923-1924, p. 107, contains estimated costs of cutting the bracken at four centres and also an estimate of the improvement in the rentable value of the cut areas (after three seasons' treatment) as compared with that of immediately adjacent land that had not been treated. The cost of cutting for three years is estimated at from 32/- to 54/- per acre for the whole period, i.e. an average of from 11 - to 18/- per acre per annum. At one centre it was estimated that the cut area, after three years' treatment, was worth 15/- per acre, per annum, more than adjacent untreated land.

#### *Experiments in Other Areas.*

Experiments carried out in North Wales<sup>(8)</sup> and Scotland<sup>(9)</sup> and<sup>(10)</sup> have indicated that bracken may be eradicated in the course of a few years by systematic cutting. The experiments in Scotland also showed that useful results may be obtained by spraying the bracken with solutions of various substances such as sulphuric

\* The other section of the general problem referred to the improvement of hill pastures by manurial means.—See *Society's Journal*, Vol. II (Sixth Series).

acid, hydrochloric acid, copper sulphate, etc. Although spraying is cheaper than cutting, it appears that the vegetative part of the bracken plant is very resistant to certain of the commoner spraying materials, and therefore it is necessary in the case of bracken eradication to use these substances in such quantities as might be very harmful to other herbage plants.

Further experiments are in progress in Scotland<sup>(11)</sup> in order to examine the possibility of controlling bracken by introducing into the plant a fungus which gives rise to a wilting disease, but so far no very conclusive results have been obtained.

The evidence obtained from the cutting experiments at these centres showed that the time of cutting was the all important factor, and that the optimum time for certain districts was the beginning of July. At this time of the year practically the whole of the food reserve of the plant is in the leaves and stems and not in the extensive underground creeping rootstock. By cutting the bracken systematically at this time it is thus reasonable to suppose that in the course of two or three years the plant's reserves can be drastically depleted. Owing to the earlier and warmer climate of the West and South-West of England, it was thought that the bracken might reach the optimum stage for cutting earlier than in the areas considered above; therefore, certain of the experimental areas established in connection with the trials under review were subdivided into two plots, viz.: the June plot, which was cut during the first week in June; and the July plot, cut during the first week in July.

#### EXPERIMENTAL.

The area selected at each centre was several acres in extent and where possible the cutting was done by means of the mowing machine. It was found in some cases that the first cutting had to be done by hand with scythes owing to the density and vigour of the bracken combined with the natural difficulties of the sites. The plots were visited periodically and records were taken of the growth, vigour and density of the bracken. In addition, the extent to which bracken had re-established itself at certain of the centres where cutting had not been done for one or two seasons, was recorded. These records are summarised in the paragraphs which follow.

*The Centres.*

Table No. 1 indicates the location and nature of the centres at which the bracken eradication trials were carried out.

TABLE No. 1.

DETAILS OF CENTRES.

Centre.	County.	Geological Formation.	Soil.	Lime Requirement % *	Experiments Commenced.
Long Ashton Golf Course.	Somerset	Mountain Limestone	Heavy Loam	0.62	1921
Ashton Park ..	Somerset	Millstone Grit	Heavy Loam	0.40	1921
Wootton Fitzpaine	Dorset ..	Lower Lias	Clay	0.66	1921
Lydney .. ..	Gloucester	Coal Measures. Millstone Grit. O.R. Sandstone.	Loam	1.09	1921
Pencombe ..	Hereford	O. Red Sandstone.	Light Loam.	0.53	1924

\* By the Hutchinson McLennan method.

The soils at each centre have been described in detail in previous reports, and the most striking feature of them is their high "lime requirement." From column 5, Table No. 1, it will be noticed that the lime requirement of the soil at the Lydney centre is 1.09%. This is equivalent to a requirement of 11 tons per acre carbonate of Lime (or 6 tons per acre quicklime). The lowest lime requirement is that at Ashton Park of 0.40%, equivalent to 4 tons carbonate of lime per acre.

At all centres the bracken was so high and dense at the commencement of the experiment as to inhibit grazing. This is clearly shown in Table No. 2.

TABLE No. 2.  
PARTICULARS OF BRACKEN AT COMMENCEMENT OF EXPERIMENT.

Centre.	Average Height of Bracken.		Average Density per 4 square yards.
	Feet.	Inches.	
Ashton Golf Course .. ..	3	6	89 Fronds.
Ashton Park .. .. .	3	0*	122 „
Wootton Fitzpaine .. ..	4	6*	122 „
Lydney .. .. .	2	6	130 „
Pencombe .. .. .	1	6*	75 „

\* The Bracken at these centres had been cut in the past for litter, but the cutting had been so late in the season that it had not had any considerable detrimental effect on the bracken.

#### SEASONAL OBSERVATIONS AT CENTRES.

##### NO. 1 CENTRE—LONG ASHTON GOLF COURSE.

At this centre both June and July plots were established. Each plot measured approximately  $7\frac{1}{2}$  acres. The plots were situated on the slope of a hill which is fairly steep. The bracken at this centre had been untouched for many years and any herbage that was present in the open patches was of an extremely poor and coarse type. The soil is very thin, overlying rock.

##### JUNE PLOT.

*Season 1921.* The first cutting was not possible until June 21st as the season was so abnormally dry that the bracken on June 21st was more nearly comparable on that date to its condition on June 1st in a normal season. At the time of cutting, the bracken was about 3 feet in height and more or less fully grown. The plot was cut over again on August 16th, by which time the bracken was again very thick and strong. On September 20th there were numerous plants on the plot, but they only averaged about 8 inches in height, and were less in number than at the beginning of August. By October 20th these plants had ripened off and they had not made any noticeable growth since September.

*Season 1922.* The plot was first visited on May 15th when there were only a few fronds above the ground and these did not

exceed 6 inches in height. The plot was cut on June 6th, when the height of the fronds varied from 9 inches to 1 foot 6 inches. They were not fully mature at the time of cutting. The second cutting was carried out on August 5th when the growth of the fronds was about the same as it was previous to the June cutting, except that there was a larger percentage of small fronds, only a few attaining the maximum height of 1 foot 6 inches. By September 10th there were only a few small fronds scattered over the plot. These had not increased by the end of October when they were ripe.

*Season 1923.* At the time of the first visit during May 1923, there were a few isolated fronds scattered over the plot. These were less than 4 inches in height. By June 3rd there was a moderate distribution of bracken over the plot, varying in height from 6 to 9 inches. The quantity, however, was much less than on previous occasions. The first cutting for 1923 was carried out on June 6th. On July 1st there was a scattering of plants over the plot, which had developed since the June cutting, and by the end of July the growth was not very dense. The second cutting was made on August 7th, after which there was little growth, the bracken being ripened off by September 25th.

*Season 1924.* On April 1st no growth was noticeable, and on May 1st only one or two fronds could be seen. The plot was cut on June 7th in very wet weather. It was obvious by June 14th that many of the fronds had been missed by the mowing machine when the plot was cut on June 7th, owing to the fact that these fronds were too short. By July 2nd this bracken appeared to be fairly strong and was about 6 inches high. It should be pointed out that part of this plot had received a dressing of lime, and here the growth of the bracken was strongest. The average height of the bracken had increased to over 1 foot by the end of July. The bracken was cut again during the second week in August and after this cutting there was no further growth.

*Season 1925.* No growth of the bracken was noticeable on April 22nd and by May 20th there were only a few fronds measuring from 3 inches to 6 inches in height. A small area of this plot had not been cut in 1924, and by June 1925 the bracken on this area was very thick and about 2 feet 6 inches in height. The plots were visited on June 25th in order to decide whether there was sufficient bracken to justify cutting and as the growth was so small, cutting was delayed until the end of July after which time the bracken made no further growth.

*Season 1926.* The plot was examined on May 9th. There were occasional fronds (2 to 4 inches high) over the area. The leaves were half expanded and it appeared as though the bracken had almost reached its maximum height. From May to June the weather was very wet and mild and was ideal for bracken growth, so that by the middle of June the height of the bracken had increased to 1 foot, and it seemed fairly healthy. On the areas that had not been cut in previous seasons, the bracken was very strong and measured from 2 feet to 4 feet in height. Cutting was carried out during the last week of July after which there was very little growth, the maximum height of the bracken in the autumn not exceeding 6 inches.

*Season 1927.* The growth of the bracken by June 2nd was only very small; there were only a few plants which exceeded 3 inches in height and it was obvious that the amount of bracken present would in no way be detrimental to the spring and summer grazing. The bracken growing on the uncut areas was 3 feet in height and very dense. Certain areas of the plot which previously had been covered with dense bracken were absolutely free from it. The dying out of the bracken was probably aided by the spring drought of 1927.

#### JULY PLOT.

*Season 1921.* The plot was cut by hand during the middle of July. The plants at the time of cutting averaged about 3 feet 6 inches in height and were fully grown. From the time of cutting to the end of the season the bracken made no new growth.

*Season 1922.* On May 15th there were only a few fronds visible and these did not exceed 6 inches in height. By the beginning of July the height of the bracken had increased to about 2 feet 6 inches, and it was considerably stronger than on the June plot at the same time. The first cutting was between July 3rd and 7th and was carried out by machine, a man and two horses being employed. On September 10th there were a few fronds scattered over the plot varying in height from 9 inches to 1 foot 3 inches. A second cutting was made on September 21st, after which the bracken made no further growth during the season.

*Season 1923.* At the beginning of the grazing season the growth of bracken was very small, but the height had increased by July 14th, being from 1 foot to 1 foot 6 inches when cutting was carried

out. After cutting, the bracken made slight growth, and at the end of the season there were only a few isolated fronds averaging from 6 inches to 9 inches.

*Season 1924.* The bracken appeared to be almost fully grown by June 7th, in that the leaves were completely uncurled. The average height was only 9 inches. The bracken was cut between July 11th and 14th when the bracken was about 1 foot high. At this time there were about twelve plants per square yard. On the uncut areas the bracken was very dense and about 3 feet in height. When the plot was visited on September 14th there was no fresh growth of bracken, and any small fronds were ripened off by November 16th.

*Season 1925.* The growth of the bracken on the plot at the beginning of this season was very slow and by May 26th the plants were only very sparse and not exceeding 6 inches in height. On the uncut area the bracken was twice as high. On June 7th the height of the bracken had not greatly increased on the plots and the plants appeared yellow and sickly, whereas on the uncut patches the bracken was 2 feet 6 inches high and growing strongly. The bracken was cut on July 21st, 25th and 26th, after which it made no further growth and by the end of October the only fronds on the plot were diminutive ones left by the mowing machine in July.

*Season 1926.* On May 9th there were practically no plants to be seen, but after this, as the result of warm damp weather, the bracken increased somewhat rapidly so that by July 14th there was a moderately thick covering of bracken of an average height of 1 foot 3 inches. The colour of the plants was somewhat pale. The bracken outside the cut area was very strong and vigorous. The bracken was cut on July 21st and 22nd, and there was no further growth during the latter part of the season.

*Season 1927.* The bracken was not cut this season, and although in patches the growth was somewhat dense, the quantity did not affect the grazing of the main portion of the plot. During the summer of 1927 the bracken on the uncut areas reached a height of 3 feet 6 inches despite the spring drought.

#### GENERAL NOTES ON THE ASHTON GOLF COURSE CENTRE.

Both plots (June and July), were again visited on July 9th, 1930, i.e., four years after the last cutting of the bracken. During this period the whole area had been allowed to revert to a more or less

wild state. A certain amount of grazing had been carried out, but this was uncontrolled and very spasmodic. Despite this, the average height of the bracken at the time of the 1930 visit was only 9 to 12 inches, and on no portion of either plot could it be said that the density of the bracken would be an impediment to grazing. The bracken on the July plot was a little stronger than that on the June plot. The spring of 1930 was marked by a prolonged drought and the herbage at this centre was dried up at the time of the visit. It appeared that if the cutting treatment had been continued for another year or two after 1926 the bracken could have been completely eradicated. It is interesting to note that, prior to cutting, the predominant grass occurring with the bracken was Yorkshire Fog, but now that the bracken had been reduced the previously associated grass had been replaced by Sheep's Fescue, Bent, Sweet Vernal, Tall Oat and Cocksfoot. This type of moorland grazing is, without doubt, superior to the original bracken and Yorkshire Fog combination, but the manurial trials which were carried out at this centre indicated quite clearly that the application of 10 cwts. per acre of basic slag would transform this rough moorland herbage, which had taken the place of the bracken, into an exceedingly useful type of grass land, consisting in the main of Wild White Clover, Crested Dogstail, Perennial Ryegrass, Sheep's Fescue and Birdsfoot Trefoil. It should be pointed out that the application of lime did not assist in ridding this area of bracken, despite the fact that the soil was strongly acid.

The recurrence of the bracken on the plots appears to some extent to be seasonal. It will be recalled that in the season 1924, which was very wet, the bracken made strong growth during the early spring.

#### NO. 2 CENTRE—ASHTON PARK.

At this centre the bracken had been cut for litter in rotation with other fields prior to the commencement of the experiment, and in 1920 it was cut for the first time with the definite object of eradication. It was decided that at this centre there should be only one plot and that cutting should be carried out when the bracken was about 1 foot high. The field, which originally formed part of a deer park, was enclosed for intensive grazing with sheep and cattle in 1918 and since then it has always carried a large head of stock. Owing to the level character of the site it was possible to cut the bracken by means of a machine—scything being unnecessary.



*Season 1920.* The bracken averaged from 3 to 4 feet in height, at the time of cutting in June. It was again cut during the first week in September, when the average height was 1 foot.

*Season 1921.* The first cutting took place during the third week in May when the bracken was 1 foot high. A further cutting was made at the end of July when the bracken had again attained a height of 1 foot. The plot was inspected on October 5th when there were scarcely any shoots of bracken visible on the plot, and those plants which were showing were only about 6 inches high. The herbage at this centre was quite good and wild white clover was well spread over the whole area.

*Season 1922.* The plot was cut twice during the season, viz. : June 6th and July 21st. During the whole of the season the plants did not exceed 6 inches in height and there was only a small quantity of plants scattered over the area. The bracken on the plot was in a very weak condition.

*Season 1923.* The bracken was cut twice this season, on June 6th and during the last week of July. Prior to cutting, the few fronds of bracken that appeared on the plot only averaged 4 to 6 inches in height and after cutting only a negligible number of weak short plants appeared. The uncut bracken in the spinney bordering the plots attained a height of approximately 3 feet 6 inches to 4 feet this season and formed a dense thicket.

*Season 1924.* Two cuttings of the bracken were made this season, the first being in June and the second at the beginning of August. Before the June cutting there were only a few fronds of bracken from 2 to 4 inches in height sparsely scattered over the plot. Between the June and August cuttings the bracken made slight growth, and after this cutting the wet conditions which prevailed appeared to favour the growth of the fronds, which grew to a height from 6 to 9 inches. By the end of the season, however, the bracken had all died down.

*Season 1925.* This plot was visited on June 7th when the bracken was very sparse and the majority of the fronds did not exceed 3 inches in height. By June 28th, however, the growth and density of the bracken had increased considerably so that it was decided to cut the plot in July. After the cutting the bracken made no further growth, although the plants in the spinney, which had not been cut, were 4 feet in height.

*Season 1926.* The season opened with warm, damp weather which appeared ideal for the growth of bracken, yet by June 4th the average growth of the bracken was only 4 inches and the distribution of the plants very sparse. The plot was cut during July, after which there was no further growth of bracken.

*Seasons 1927-1929.* The bracken was cut in July 1927, 1928 and 1929, but the growth during each of these years was exceedingly small and in no way interfered with the grazing of the plots.

#### GENERAL OBSERVATIONS ON THE ASHTON PARK CENTRE.

The plot was visited on July 8th, 1930, when the bracken which occurred in a few odd patches attained an average height of from 4 to 6 inches. In some places a few fronds approximately 9 inches in height were seen. Manurial and liming trials which had been carried out in conjunction with the bracken cutting, the materials being applied in 1921, had indicated that the herbage of this originally bracken infested area could be vastly improved by the application of basic slag. Lime did not materially assist in eradicating the bracken. By 1930 the effects of the manures had disappeared and the herbage was reverting to a rough type, including such grasses as Sweet Vernal, Sheep's Fescue, Tall Oat, Yorkshire Fog and Brachypodium. The last named species was particularly noticeable on the limed area. No difference could be noted in the height or density of the bracken on the manured and unmanured plots. The quantity and density of the bracken on the occasion of the 1930 visit would not impede grazing.

#### NO. 3 CENTRE—WOOTTON FITZPAINE.

The field in which the cutting experiment was conducted is situated at about 250 feet above sea level. The ground was very rough, so that cutting had to be done by means of scythes.

*Season 1921.* Two areas of bracken were examined on July 14th. On the first the bracken, which was very dense, was from 4 to 5 feet in height. This bracken had not been cut for the two preceding years. On the second area, where the bracken had been cut for bedding material in 1920 and previously, the bracken was from 2 feet 6 inches to 3 feet in height and somewhat more dense than on the other area. About 6 acres of this bracken covered land was taken for the experiment and cut over by means of scythes towards the end of July.

*Season 1922.* The experimental area was sub-divided into two 3-acre sections in order to provide a June and July plot. The bracken on the plot which was cut in June was about 22 inches in height at the time of cutting. On the July plot the bracken was 36 inches high. It was noticed that the cutting in July 1921 had considerably reduced the bracken over the whole area.

*Season 1923.* The June and July plots were again cut in June and July respectively, and when they were visited on October 18th there was practically no bracken on either plot. The few fronds that were present were only about 4 inches to 6 inches high and the herbage was very closely grazed.

#### GENERAL OBSERVATIONS ON THE WOOTTON FITZPAINE CENTRE.

The result of three seasons systematic cutting at this centre had been to reduce the bracken to almost negligible quantities. An area of the plots (both June and July) which had received basic slag in 1921 responded well to the treatment.

#### NO. 4 CENTRE- LYDNEY.

At this centre June and July plots were established. Prior to 1921 the bracken on this hill-side was very high and dense, in fact a herd of store cattle straying amongst the bracken could not be seen.

*Season 1921.* The June plot was cut in the middle of June and at the beginning of September, and the July plot during the first week in July and the beginning of September.

*Season 1922.* The plots were visited on July 3rd. The June plot had been cut prior to the visit, and the July plot had not been cut. The bracken on the July plot had been substantially reduced as the result of cutting in 1921.

*Season 1923.* An inspection of the plots was made on June 29th. At the time of the visit, the June plot had not been cut as the farmer stated there was not sufficient bracken in June to make cutting worth while. Measurements made on June 29th indicated that the bracken averaged about 1 foot 6 inches to 2 feet in height. The number of fronds was considerably less than in previous years. On the July plot the bracken was very thin. There were only a few fronds, and the average height varied from 1 foot to 1 foot 6 inches. The growth was much less dense than in previous years.

It was agreed to cut both June and July plots in July and this was carried out.

The plots were visited on July 30th, *i.e.*, just after the cutting, and there were a few pale green fronds from 6 to 15 inches in height left standing. A further visit was made on October 3rd when the bracken was very patchy and generally from 11 to 15 inches in height. No second cutting was made this season.

*Season 1924.* The plot was visited on October 3rd. It was noted that the bracken had been cut previously—date unknown—and the growth of bracken on the cut area appeared to have been very small. No appreciable growth of fronds had occurred since cutting and the herbage was of good quality where slag had been previously applied, being closely grazed and containing much clover.

*Season 1925-26.* No data are available for these seasons.

*Season 1927.* On June 23rd, the growth of bracken was very small over the cut areas. The height of the plants was generally less than 1 foot, and only a very few outstanding fronds measured 18 inches. The density was variable, but over the greater portion of the area growth was extremely thin and would not interfere with grazing. A few patches of relatively dense growth, however, remained and in one of these the height averaged 2 feet 6 inches.

The herbage was in good condition.

No data relating to cutting are available for this season.

*Seasons 1928-1929.* No data are available for these seasons.

#### GENERAL OBSERVATIONS ON THE LYDNEY CENTRE.

The cutting of the bracken at this centre resulted in a very substantial reduction in the height and density of the bracken in the course of two seasons. A section of the plot which received basic slag responded well to the treatment. The plot was last visited on July 9th, 1930, on which date the bracken had not been cut for that season. The average height of the plants was from 15 to 18 inches, with a maximum height of 2 feet 6 inches. There were many patches of strong healthy bracken and it was obvious that the density of the bracken was definitely interfering with the grazing of the pasture. The beneficial effects of the fertilisers, that had been applied in 1922, were not noticeable on the occasion of this visit, and the herbage over the whole area was reverting to a

rough type consisting to a large extent of Yorkshire Fog, Potentilla, Yellow Bedstraw and Fescue. The recovery of the bracken and the reversion of the herbage was more pronounced at this centre than at any other on which such observations were made.

#### NO. 5 CENTRE—PENCOMBE.

This centre was established in 1924 when two plots were laid down, viz.: (1) Slag but bracken uncut; and (2) Bracken cut in July but no slag. It was hoped that the former treatment would provide information on the efficacy of dressings of phosphatic manures as a means of clearing bracken infested areas by making possible heavy stocking of the areas. The Slag, 30% grade, was applied at the rate of 10 cwt. per acre. At the commencement of the experiment at this centre, the bracken varied from 1 foot to 2 feet in height, and in many places the patches were very dense. The herbage was rough and "bronzed" in appearance and unpalatable to stock.

*Season 1925.* The plots were visited during September. The bracken on the slagged plot varied from 9 inches to 2 feet in height, and the plants were distributed over the areas in thick clumps. The herbage had responded markedly to the slag treatment. There was an excellent development of wild white clover, and the plot had been well grazed.

The bracken on the plot, which was cut over in July, had been very much reduced by the treatment, for in September there were only a few fronds scattered over the plot. The average height of the plants was 9 inches. The herbage (which had not been slagged) consisted in the main of rough ungrazed grass with very little clover.

*Season 1926.* On May 8th, there was an excellent growth of clover on the slag plot. The bracken was about 6 inches in height. The fronds appeared strong and were only partially uncurled. On the cutting plot there were only a few fronds, and these were not more than 4 inches in height. A second visit was made on November 3rd. The herbage on the slag plot was excellent in between the clumps of bracken, which were very strong and dense and about 2 feet in height. On the cutting plot the bracken had been considerably reduced in height and frequency. The average height was about 6 inches. There had been a fair amount of grazing on this plot during the summer, but there was no clover development and the herbage was poor in type. The grazing of this plot had been done owing to a general shortage of grass keep.

*Season 1927.* An examination of the plots was made on June 24th. The herbage on the slag plot was still showing the benefit derived from the fertiliser, although a number of rough ungrazed patches of Yorkshire Fog were appearing on the plot. The bracken was from 9 inches to 1 foot in height and the plants appeared to be fairly strong, although somewhat weaker than in previous seasons. The plot had been well grazed. On the cutting plot the bracken was weak. The fronds were less than 9 inches in height and not very numerous except in occasional odd patches, and even on these the bracken was much less vigorous than on the uncut but slagged plot. The herbage was poor and ungrazed.

*Season 1928.* The plots were visited in June and they were very similar in appearance as regards growth of bracken and herbage characteristics to what they were at the same period of 1927. The bracken was cut in July.

*Season 1929.* The plots were examined on August 19th. The slag plot still appeared very much improved, with plants of clover in patches. The bracken was weak. The whole field had been slagged in the fall of 1928 and the slagging had extended over the cutting plot, as well as the slag plot. The bracken on the cutting plot, which had been cut in July, was extremely weak. There were only two or three plants per square yard and the height on the plot varied from 2 to 6 inches. In parts of the field the bracken was over 3 feet high and so dense as to completely cover the ground.

#### GENERAL OBSERVATIONS ON THE PENCOMBE PLOTS.

The plots were visited on July 10th, 1930. On the original slag plot, the bracken was not very dense and varied in height from 1 foot to 1 foot 6 inches. The bracken on this area had been cut in the late summer of 1929 for bedding purposes. On the cutting treatment area, the bracken had been very much weakened as the result of the operation. Although not cut in 1930 prior to the inspection, the bracken was only about 6 inches in height. In a few odd patches it reached 1 foot. The intensity of the plants was about the same as previously. Where there were patches of bracken the herbage was coarse, containing plenty of Yorkshire Fog, Yellow Bedstraw, Tormentil, etc., and in these areas the bracken was definitely interfering with the grazing. On the whole, the herbage on this plot was poor.

Observations at this centre suggest that bracken attains its

maximum development before the second week in July, so that in order to ensure a considerable degree of success in its eradication it is necessary to cut it earlier in the season (e.g. June), than was done in the experimental cuttings.

The experiment at this centre proved quite definitely that by cutting, it is possible to diminish the amount of bracken, but it is necessary to supplement the cutting treatment with the application of fertilisers in order to encourage grazing by stock and thereby to improve the type of herbage.

Treatment with slag alone appeared ineffective as a practical means of clearing the bracken.

Table No. 3 below summarises the results obtained from 1921 to 1930 at all centres.

#### CONCLUSIONS.

- (1) By systematic cutting, bracken can be eradicated, or at any rate so reduced in height and density as not to interfere with the grazing of a pasture.
- (2) The time for cutting appears to vary slightly in different localities and under slightly different climatic conditions. In any case, it is best done when the fronds have reached optimum growth, i.e., when the major portion of the food supply of the plant is in the leaves and stem and not in the underground root system. In the South West of England, this period is reached during June and July.
- (3) In areas where the bracken is dense and strong, it is desirable to cut it twice each year for the first one or two seasons, especially if a quick clearance is required. Subsequent cuttings will depend on season and stocking. The first cutting should be made during the first week in June, and the second when the bracken is again strong enough to cut. This may be in August or September. It may be necessary to carry out the first cutting by hand, using scythes, owing to the density of the bracken, but if the land is fairly even and without steep gradients subsequent cutting can be done by means of the mowing machine.
- (4) In the course of two or three years it is possible, by means of cutting, to reduce the average height of the bracken from 4 feet to a few inches and at the same time to reduce the density from 100 fronds per four square yards to 8 or 10.

WALLACE AND LING on Report of Experiments on  
the Eradication of Bracken.

87

TABLE No. 3. EFFECT OF CUTTING BRACKEN, 1921—1930.

Date of Visit.			CENTRES.									
Season.	Month.	Remarks.	Ashton Golf Course.		Ashton Park	Wootton Fitzpaine.		Lydney.		Slag Plot.	Pencombe.	
			June Plot.	July Plot.	July Plot.	June Plot.	July Plot.	June Plot.	July Plot.			
1920	June	Before cutting	—	—	3' to 4'	—	—	—	—	—	—	
1921	June	Before cutting	3' very dense	—	1 foot	2' 6" to 5' very dense	4' very dense	4' very dense	—	—	—	
	July	"	—	3' 6" dense	1 foot	Cut with scythe	Bracken cut June	Bracken cut July	—	—	—	
	Aug.	—	Strong & dense	No growth after cutting	No further growth	—	—	—	—	—	—	
	Sept. Oct.	—	8" dense Ripe	—	Few odd fronds 6"	—	—	Bracken cut	—	—	—	
1922	May	Before cutting	6" few fronds 9" to 1' 6"	6" few fronds	Slight and not exceeding 6" during whole of season	22" dense	3' dense	Much reduced	—	—	—	
	June	—	—	—	—	—	—	Cut	—	—	—	
	July	—	9" to 1' 6"	2' 6" strong	—	—	—	—	Cut	—	—	
	Aug. Sept.	—	Few small fronds Ripe	9" to 1' 3" weak Nil	—	—	—	—	Very much reduced	—	—	
1923	Oct.	—	—	—	—	—	—	—	—	—	—	
	May	Before cutting	4" very few fronds 6" to 9"	Slight	4" to 6" sparse	—	—	—	1' to 1' 6" very sparse	—	—	
	June	"	moderate	Slight	Practically no further growth	Bracken cut	—	1' 6" to 2' sparse	—	—	—	
	July	—	Slight	1' to 1' 6"	Few fronds 6"	—	Bracken cut	—	—	—	—	
	Aug. Sept.	—	Very slight Ripe	Only slight growth after cutting	—	4" to 6" slight	4" to 6" slight	Cut 11" to 15" thin	—	—	—	
1924	April	Before cutting	Nil	Nil	—	—	—	—	—	1' to 2' dense	—	
	May	"	Few fronds	Slight 9"	Few fronds 2" to 4"	—	—	—	—	—	—	
	June	"	—	—	6" to 9"	—	—	—	—	—	—	
	July	—	6" moderate	1' twelve plants per sq. yard	No further growth after second cutting	—	—	—	Un-cut	Cut	—	
	Aug.	—	1' moderate No further growth after second cutting	—	—	—	—	—	—	—	—	
	Oct.	—	—	—	—	—	—	Growth for Season very small	—	—	—	



WALLACE AND LING on Report of Experiments on  
the Eradication of Bracken.

TABLE NO. 3.—CONTINUED.

Date of Visit.		CENTRES.									
		Ashton Golf Course.		Ashton Park.		Wootton Fitzpaine.		Lydney.		Pencombe.	
Season.	Month.	Remarks.	June Plot.	July Plot.	June Plot.	July Plot.	June Plot.	July Plot.	June Plot.	July Plot.	July Cut Plot.
1925	April	Before cutting	Nil	Nil	—	—	—	—	—	—	—
	May	"	Very slight	Slight	—	—	—	—	—	—	—
	June	"	Very slight	Slight	—	—	—	—	—	—	—
	July	—	No further growth	No further growth	—	—	—	No data.	—	Cut	—
	Sept.	—	"	"	—	—	—	—	9" to 2' some dense patches	9" very sparse	—
1926	May	Before cutting	2" to 4" occasional	Nil	—	—	—	—	6" strong well distributed	4" sparse	—
	June	"	1' occasional	—	—	—	—	—	—	—	—
	July	"	Slight	1' 3" moderate	4" sparse No further growth	—	—	No data	—	—	—
	Aug.	—	No further growth, few fronds 6"	No further growth	—	—	—	—	—	—	—
	Sept.	—	"	"	—	—	—	—	2' dense	6" sparse	—
1927	June	Before cutting	Very slight Practically no growth of bracken this season	Slight Practically no growth this season	Bracken cut Practically no growth	—	—	Height generally less than 12" with some fronds to 18". Density relatively sparse. Some patches were growth averaged 2' 6". No data re cutting.	9" to 12" fairly strong	Less than 9" sparse, but some patches	—
	—	—	Bracken not cut	Bracken not cut	Bracken cut	—	—	No data.	As 1927	Out July	—
1928	—	—	Bracken not cut	Bracken not cut	Bracken cut	—	—	No data.	Weak	Very sparse 2" to 6"	—
1929	—	—	Bracken not cut	Bracken not cut	Bracken cut	—	—	—	1' to 1' 6" fairly strong in patches which were interfering with grazing	6" weak, but few strong patches interfering with grazing	—
1930	July	—	Bracken not cut, but only 9-12" Not interfering with grazing	Bracken not cut, but only 9-12" Not interfering with grazing	Bracken not cut, 4' to 6" sparse—not interfering with grazing	—	—	15" to 18" Maximum height 2' 6" Dense in patches and interfering with grazing	—	—	—

- (5) Growth and density of bracken is very much influenced by climatic conditions. In a warm, damp and open spring bracken grows rapidly. This applies equally to cut and uncut bracken. Under such conditions, cutting is essential on areas where the bracken has been cut previously and then possibly left uncut for one or two seasons, otherwise the bracken will soon re-establish itself.
- (6) Bracken flourishes on acid soils, but in the West of England it appears that normal dressings of lime to bracken covered areas will in no way reduce the height or density of the bracken even after a period of nine years.
- (7) Bracken cannot be substantially reduced solely by the application of phosphatic fertilisers, such as basic slag.
- (8) The cutting of bracken does not result in a vastly improved herbage. Yorkshire Fog is the grass most commonly found in association with old established bracken areas. After cutting the bracken, the herbage changes considerably, but that which replaces the original, while being somewhat better, is still of inferior quality and of the moorland type, containing such species of grass as Sheep's Fescue, Sweet Vernal, Bent, Tall Oat, and a small proportion of Cocksfoot. Weeds, such as Tormentil, Yellow Bedstraw, Mouse-eared Hawkbit and Plantains are common. Cocksfoot grass has been found to persist in the herbage of areas of land where the bracken has been cut systematically for a number of years and then allowed to revert.
- (9) In order to obtain a better type of herbage on bracken covered land, it is necessary to apply a suitable phosphatic fertiliser in addition to cutting the bracken, and it is essential that this treatment be accompanied by heavy stocking of the land.
- (10) Land which has been freed of bracken and the herbage improved by the use of fertilisers and then left unstocked and without further treatment for four or five years may rapidly revert. The bracken will reach a height and density as to impede grazing and the herbage will become very poor.
- (11) In many areas it will be neither practicable nor economical to attempt the eradication of the bracken by cutting methods. On very steep hillsides, on very uneven ground or in other situations where the use of the mowing

machine is impossible, the expense necessary will not justify any effort being made. There are, however, large tracks of bracken covered land which, in their present condition are useless to the grazier, that can be economically cleared and converted into useful pasture.

#### RECOMMENDATIONS FOR THE RECLAMATION OF BRACKEN COVERED AREAS.

The following procedure for reclaiming bracken infested areas is recommended as the result of the experiments :

1st Year.	June (mid).	Bracken cut, if necessary, by scythe.
	August.	Bracken cut by machine.
	September.	10 cwts. per acre 30 per cent Basic Slag (or equivalent in other forms of phosphatic fertilisers) applied.
	Autumn.	Area well stocked until winter.
2nd Year.	June.	Bracken cut by machine.
		Field heavily stocked.
	August or September.	Bracken cut.
3rd Year.	July (early).	Bracken cut. Field stocked.
4th Year.	July.	Bracken cut (if necessary).
		Field stocked.
5th Year.	.. ..	Probably unnecessary to cut bracken except if spring is wet and mild.
	September.	5 cwts. per acre Basic Slag applied.

The treatment for subsequent years should be simple. The bracken should be cut over when necessary, but if the stocking, cutting, manuring and management in the previous years have been satisfactory, no cutting should be required, although it is an excellent plan to run the mowing machine over all grazing fields during July whether or not they were originally bracken covered, in order to cut down any rough ungrazed patches. Basic slag or some other phosphatic fertiliser should be applied at a rate equivalent to 5 cwts. per acre 30% basic slag every fifth year after the initial dressing of 10 cwts. per acre.

#### ACKNOWLEDGMENT.

The Experiments and Education Committee of the Society desires to express its best thanks to all who have co-operated and rendered assistance in carrying out these experiments.

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## VIII.—THE SOCIETY'S EXHIBITION AT TORQUAY.

*By F. H. Storr.*

To visit a new centre must always be something of a risk for so large a Society as the Bath and West, but in the case of Torquay the experiment turned out to be a great success. For this the keenness of the town itself was largely responsible, and the Society will have the happiest recollections of their warm welcome and of the excellence of the preparations made for their reception. The hilly nature of the locality restricted the choice of sites to an unusual degree, but the one chosen, though on the small side and necessitating a certain limitation in the acceptance of entries, was cleverly adapted by the Society's Superintendent of Works, and provided a picturesque show ground. If heavy rain had fallen before the Show difficulty might have arisen in handling the heavier exhibits ; as it was the removal of stock proved to be no easy matter, and the opinion was generally expressed that only the most expert planning had ensured the successful lay-out of the ground.

The principal event of the meeting was the visit of H.R.H. The Prince of Wales. The speediness of air communications enabled him to combine with this visit the inspection not only of a scheme for extending the water supply of Torquay, but also of the more westerly of his Duchy property. Duchy tenants from a wide area were given the opportunity of meeting H.R. Highness in the show ground, and it is hoped that this popular function may be repeated at future Shows of the Bath and West. The Prince graciously expressed his complete satisfaction with the Show and with the arrangements made for him, while His Worship the Mayor of Torquay was able to assure the Council of the Society that the Show had given the greatest satisfaction and pleasure to the town and district. The Council of the Society would wish to take this opportunity of acknowledging the immense amount of valuable help given ungrudgingly by all with whom the Stewards came in contact ; not only His Worship the Mayor, but all members and officials of the Town Council, the Local Committee, and especially their able and energetic Secretary, Capt. W. D. Mackinnon, whom it has since been a pleasure to welcome as a member of the Society. In the County of Devon the support of the County Association and the staff of the Agricultural Organizer was equally successful. The County Association not only assisted with a great deal of valuable information but generously contributed £150 of additional





prize money, while many of their committee acted as stewards in various departments of the Show. The relations of the County with the Society date back to the inception of the migratory show system, so that it is a matter of particular satisfaction that the County Association continues to welcome the visits of the Bath and West. Not least among the assets of the Society on this occasion was the fact that it had as President Lord Mildmay of Flete, whose ability and popularity were clearly demonstrated at the Annual General Meeting.

Though in most departments the Show was an unqualified success, the numbers of the stock entries showed a falling off from those of recent years. This was probably due in a great degree to the distance of Torquay from the centre of the pedigree stock industry, which added to the expenses of exhibition at a time when breeders could ill afford it. The horse section, however, made up for failings in other directions, being of quite unusual quality, and, in the hunter and pony classes, well above the usual numbers. It will not be out of place, therefore, to give a more detailed description than usual of these classes. Among the shires, Sir Gomer Berry's "Llyncllys Lady Love" stood out as of excellent quality, though on the small side, and had won a junior championship in London. The entries in Class II and the first and second prize-winners among the stallions were also outstanding animals. Hunter mares and foals provided a very good class, Mrs. Vinson-Thomas' "Martrine" and Major Arden's "Nine Pounds" showing exceptional quality and type. Yearlings were distinctly above the average, and the two-year and three-year-olds contained quite a number of young horses showing exceptional promise. In the hunter riding classes the entry of 28 might well have been divided into light and heavy weights, so good a standard of quality was maintained. The five-year-olds were better than the four-year-olds, but altogether the hunters, especially the young stock showed an improvement even over the excellent entry last year at Swindon.

The Ladies' Hacks was a strong class in which the prize-winners were up to first-class form. The Driving Classes, though the form was good, were not well filled, a disappointment especially in the Novice Class after the big entry at Swindon. A new class, that for weight-carrying cobs, produced a big entry of exceptional quality. A record entry of 75 was obtained in the Pony Classes. The Shetland Classes were not strong, nor were the Arabs in numbers, though the winner, H.R.H. The Prince of Wales' "Algol," stood



right out from the rest. The Dartmoors showed real progress, the stallions being particularly strong, the prize-winners having bone combined with a good action, while the whole breed showed the real pony type in the head. The children's riding classes were particularly good, though in class 33 it was observed that the children did not seem to realise the importance of the tests for horsemanship, nor had the ponies had sufficient training in opening gates.

The entry in the Bacon Pig Classes was small, probably because too many farmers still underestimate the importance of breed in the production of bacon. The awards, given below, judged by live weight and dead weight, show a close correspondence, which might have been closer but for the disqualification of one "live-weight" prize-winner on account of an abscess. Disqualification for weight shows the necessity of weighing the live pigs before judging and this will be done in future.

#### BACON PIG CLASSES.

Exhibitor	Cat. No	Breed	Live Weight Awards.	Dead Weight		Award.
				Scores.	Points Awarded (Max.100)	
Sir G. A. Cooper, Bt	963	Large White	1st	7-8	70	2nd
				7-5		
G. H. Eustice	964	National Long White Lop Eared	V H C	7-3	50	3rd.
				8-7		
Viscount Folkestone	965	Large White	R.	8-14		Disqualified. One Pig overweight.
				8-3		
Ditto	966	Large White	2nd	8-8	80	1st.
				8-8		
J. Pierpont Morgan	967	Large White		6-8		Disqualified. Both Pigs underweight.
				6-1		
Seale Hayne Agricultural College	968	Long Lop Eared Sow Large White Boar	3rd	7-14		Disqualified. One Pig damaged (Abscess).
				7-18		

ENTRIES OF LIVE STOCK AND FARM PRODUCE.

	Plymouth. 1922	Swindon. 1929	Torquay. 1930
<b>HORSES—(with boxes)</b>			
Agricultural .. .. .	36	53	16
Hunters, Hacks and Ponies.. ..	135	237	280
	—171	—290	—296
<b>CATTLE—</b>			
Devon .. .. .	71	36	62
South Devon .. .. .	57	—	23
Dairy South Devon .. .. .	—	—	19
Shorthorn .. .. .	40	30	23
Dairy Shorthorn .. .. .	13	57	20
Hereford .. .. .	29	12	15
Sussex .. .. .	19	10	7
Aberdeen Angus .. .. .	14	31	30
British Friesian .. .. .	34	51	12
Red Poll .. .. .	10	34	23
Welsh Black .. .. .	—	11	—
Ayrshire .. .. .	—	28	16
Blue Albion .. .. .	—	7	—
Jersey .. .. .	76	62	22
Guernsey .. .. .	65	69	60
Kerry .. .. .	47	13	—
Dexter .. .. .	—	27	16
Dairy .. .. .	51	94	52
	—526	—572	—400
<b>SHEEP .. .. .</b>	197	172	167
<b>GOATS .. .. .</b>	25	87	66
<b>PIGS .. .. .</b>	252	249	230
<b>POULTRY and EGGS .. .. .</b>	415	712	594
<b>PIGEONS and RABBITS .. .. .</b>	—	283	256
<b>FARM PRODUCE—</b>			
Cheese .. .. .	22	43	40
Butter and Cream .. .. .	126	65	154
Cider .. .. .	28	99	143
	—176	—207	—337
	1762	2572	2346

IMPLEMENTS.

The space taken by exhibitors of Implements and Machinery reached the big total of 133,047 square feet, and exceeded the display at Swindon, though that had been above the average of recent years. More entries were available if the size of the ground had been sufficient to accommodate them. The display was a particularly fine one, and ranged from the new self-contained roller for lawns and cricket pitches to the latest models of farm tractors. It is interesting to remember that a few miles away at Newton Abbot in 1857 the earliest types of steam ploughing tackle were being shown at the Society's third migratory Show, an event illustrated in the picture lately acquired and hanging in the offices

at Bath. Where the Show was held is now the site of the race-course.

Among the most interesting and instructive exhibits was that of the Rural Industries Bureau, but there are one or two suggestions particularly with regard to the iron work, which should be helpful to the movement both from the commercial as well as the artistic point of view.

- (i) When such things as horseshoes are used for door-knockers, etc., it would be better to use old ones, it would be cheaper and more artistic.
- (ii) In fixing articles on to their backings, more care might be taken to avoid screws, etc., showing. This can usually be done quite easily by working the head of a bolt to resemble a horse-nail. or whatever the natural fixing may be, or by placing the screw where it is hidden.
- (iii) Of the four different finishes exhibited, viz. :—Armour bright—Black, Filed, and Burnished, by far the most attractive was the first, because it has the unmistakable appearance of being hand wrought. It is cheaper because there is not so much time taken in the finishing, and it looks mellow and has individuality. A beautiful example of this finish was contributed by Sarum Iron Works. There is no reason why this should not be set with lacquer if desired.

A buffed and burnished exhibit from Taunton was very nice, but the burnishing was overdone.

The blacked and filed finishes hide the good workmanship of the article, and while making it more expensive bring it down to the level of mass production or cast work.

- (iv) Simplicity of design and ornament is essential.

		Plymouth. 1922	Swindon. 1929	Torquay. 1930
Machinery in Motion .. ..	feet run	1624	1498	1708
Agricultural Implements and other Exhibits not strictly Agricultural .. ..	„	1460	1225	1210
Seeds, Cattle Foods, Artificial Manures, etc. .. ..	„	1750	1206	1345
Open Space for Farm and Horticultural Buildings, etc. .. ..	sq. feet	39485	50667	50477

# COMPETITIONS.

The numbers of entries in Show Yard Competitions may be taken as an index partly of the state of farming and partly of the efficiency of the Agricultural Committee of the County visited. At Torquay a comparatively flourishing agricultural industry and the excellent organization of the county staff under Mr. C. D. Ross combined to produce the big total of 310 entries. Three new items were included ; a Junket-making Competition, which was an attractive event at the Working Dairy ; a competition for Live Stock Judging, which proved the keen interest of the younger farming population in this important branch of agriculture ; and a competition in the making of Lobster Pots, which not only provided one of the most attractive exhibitions in the yard, but illustrated the intense conservatism of our sea-coast population in character and methods. These competitions entailed a great deal of extra work which would have borne more hardly on the Stewards but for the help of members of the County Association.

	Plymouth. 1922	Swindon. 1929	Torquay. 1930
Butter-Making (Entries now limited) ..	110	69	104
Junket-Making .. .. .	—	—	28
Shoeing .. .. .	65	37	59
Shearing .. .. .	—	—	47
Rope and Spar Making *(Hurdle Making)	—	*35	16
Live Stock Judging .. .. .	—	—	44
Poultry Trussing .. .. .	—	—	3
Lobster Pot Making .. .. .	—	—	9
	175	141	310

# GENERAL REMARKS.

Though a full report on the Education and Research Sections will be found, reference should be made here to the quite exceptional quality and number of the exhibits. The usual buildings were reinforced by one devoted to the work of the University College of the South-West, where students could be seen making use of the actual equipment necessary for their course of studies. The Ministry of Agriculture Pavilion was used to demonstrate the improved methods of marketing, symbolised by the National Mark, the key-note of which can be summed up in two words, **grading and standardisation**. Beef, fruit, eggs, poultry and other farm products were included among the exhibits, the value of which was clearly realised by the agricultural visitors. It is only to be expected

from the Society's long connection with cider-making that some of its members were largely responsible for extending to cider the advantages of the National Mark.

The Flower Tent was again a pronounced success, in fact the problem before the Stewards is to adjust the capacity of the tent to the numbers of visitors who wish to enter, so as to avoid overcrowding and allow the stands to be properly inspected.

#### ATTENDANCE.

For the second year, the experiment was continued of confining the duration of the Show to four days. Certainly the attendance of over fifty thousand would have been considered excellent under any circumstances, though the visit of H.R.H. The Prince of Wales undoubtedly contributed considerably to this result. Another factor of importance was the amount of voluntary assistance obtained in advertising the Show. For this the hearty thanks of the Society are due to the branches of the National Farmers' Union, to the Devon General Omnibus and Touring Company, to the British Legion, to many brewery companies and others, the result of their help being that the whole County were well informed of the date of the Show and many details of its attractions. Nor must the Clerk of the Weather be forgotten, though it was a matter of deep regret to the Stewards that the pleasure of visitors during the last afternoon was marred by the only serious rain that fell during the Show.

NUMBER OF ADMISSIONS.			ADMISSION RECEIPTS.		
1928	1929	1930	1928	1929	1930
45,301	30,281	50,876	£6,745	£3,530	£7,313

## IX.—REPORT ON THE SOCIETY'S DAIRY DEPARTMENT AT TORQUAY.

*By A. F. Somerville, Steward.*

As in previous years the work of the Dairy Department was divided into :—

Produce ; Working Dairy ; Tests ; Goats' Milking Classes ; and Sales of Produce.

### PRODUCE.

*Cheese.* Cheddar Cheese had 26 entries in the open classes and 5 entries in the Small Holders Class confined to the County of Devon ; last year there were 38 entries ; Caerphilly Cheese brought 9 entries as against 6 entries last year or, a total of 40 entries for Cheese as against last year's 43. Mr. J. H. Mackie, Castle Cary, was the Judge, and gave a general favourable report on the Exhibits, with the exception of one Class of Cheddar Cheese, in which texture was too open.

*Butter, Cream Cheese, Cream.* In the open Butter Classes there were 67 entries ; in a *special Class for 2lb. Keeping Butter*, in which suitability of packing was taken into consideration, there were 16 entries ; and in Classes restricted to *Devon County* 28 entries ; making a total of 111 entries as against 40 in the previous year.

For the Open Class for Clotted Cream there were 18 entries, and in those Classes confined to Devon 21 entries ; a total of 39 as against 7 last year. Cream or Soft Cheeses produced 8 entries as against 4 last year ; and for the Farm Produce Class, confined to Devon, there were 4 entries ; last year a similar Class, confined to Wilts, produced 14 entries. The total of entries for this department was 202 against 108 last year. Mrs. M. Gibson was the Judge, and spoke very highly of the keen competition and general high standard of the Exhibits, with the exception of the Novice Class.

*Junket Making.* There were also 2 Classes for Junket Making restricted to competitors from the County of Devon. Class 211,

for Devon County Dairy School Students, obtained 24 entries, and Class 242, a Championship Class for 1st and 2nd winners at Devon County Shows, had 4 entries. The prizes were offered by the Devon County Council, and the Classes were judged by Mrs. M. Gibson, were well filled, and there was a good competition.

*The Butter Making Competitions* were judged by Miss A. Mathews, Old Colwyn, N. Wales, with the exception of the Champion Class on the last day, which was again judged by Mr. A. Todd, British Dairy Institute, Reading. There were 20 entries in the Open Students Class ; 20 in the Open Class ; 15 in the Champion Class ; and 54 in Classes confined to the County of Devon, making a total of 109 entries as against last year's 75. There was very keen competition in the Champion Butter Making Class, which practically became a duel between Devon and Cornwall. Mr. S. L. Parkin won the Gold Medal for Devon, but Miss H. E. Mitchell and Miss K. Davis took the Silver and Bronze Medals for Cornwall. This is the first time for many years that a man has taken the Gold Medal. Mr. Parkin is a pupil from the Seale-Hayne Agricultural College, and had never competed before. The bulk of the cream was obtained from the West Cornwall Creameries Ltd., Leland, Cornwall, and, as usual, was excellent in quality and delivered punctually.

The Churns, Workers, Separator, Delaiteuse and other plant, including Electric Light, were provided by Messrs. Lister & Co., Dursley. The Wilts United Dairies Co., Ltd., again very kindly lent us, free of charge, Milk Churns for the Working Dairy. Messrs. Lister's foreman and Mr. G. Simmonds attended to the Boiler and working of the Separator and Delaiteuse.

#### TESTS.

The Classes for Tests were the same as last year for the Milk Tests ; Class 119 for Light Breeds ; Jersey, Guernsey, Kerry and Dexter ; Class 120 for all other Breeds. All Cows were eligible for the Butter Test.

#### MILK TESTS.

The regulations as to times of Milking and disqualification for deficiency in butter fat were the same as last year, and the Cows for both Tests were milked out at the time fixed for 3 and 2 Milkings

respectively as arranged in the previous year. All the milks were tested after each milking by Mr. W. H. Hopkins, Recorder for the Somerset and North Dorset Milk Recording Association; milk from cows entered in the Butter Test were separated at the same time. The entries for both Tests were very disappointing; this was partly due to the long distance many herds had to travel, and the owners found it more convenient to send their animals to Reading for the Royal Counties Show the following week, and the general depression in farming was a further reason for owners not entering animals at the Torquay Show; but with the large numbers of Guernseys kept in Devon and Cornwall we had hoped for a better competition. The Tables on pages 104-105 give the result of the Milking Tests.

The average results for each breed was as follows :—

<i>Breed</i>				<i>Days</i>	<i>Milk</i>	<i>Butter</i>
				<i>in Milk.</i>		<i>Fat.</i>
Jersey .. ..	..	..	..	116.8	40.32	4.986
Guernsey .. ..	..	..	..	44.6	44.083	3.870
Dexter .. ..	..	..	..	130.6	24.16	3.416
S. Devon .. ..	..	..	..	59.6	71.65	4.324
Shorthorn .. ..	..	..	..	70.0	53.00	3.700
Red Poll .. ..	..	..	..	115.0	56.125	3.666
Ayrshire .. ..	..	..	..	32	81.50	3.766

#### BUTTER TEST.

The Society gave three prizes of £10, £5 and £3. The English Jersey Cattle Society offered a Gold Medal, £10, a Silver and a Bronze Medal, but animals had to obtain not less than 42 points to qualify. The English Guernsey Cattle Society gave a £5 prize to the Guernsey Cow obtaining the best results.

The Separated Milks were churned on the following morning, all creams being churned at 54. Miss Taylor superintended the churning which commenced at 7.10 a.m., and was finished by 9 a.m. It will be observed that only one Jersey qualified for a Medal, no other cow of that breed gaining sufficient points to qualify.



The average result for each Breed was as follows : —

<i>Breed</i>	<i>Days in Milk.</i>	<i>Milk.</i>	<i>Butter.</i>		<i>Ratio.</i>
			lbs.	ozs.	
Jersey ..	116.8	40.32	2	1.45	19.16
Guernsey .	44.6	44.083	1	13.75	23.93
S. Devon .. ..	59.6	71.65	2	11.6	26.124
Shorthorn .	70.0	53.00	1	12.75	29.50
Red Poll .. .	115.0	56.125	1	15.25	22.36
Ayrshire ..	32.0	81.50	3	9.00	22.88

The Tables on pages 106-107 give the result of the Butter Test.

#### SALES OF PRODUCE.

Milk from the Yard was purchased at 8d. per gallon, and it and the products from Milk made at the Dairy, were sold at the Pavilion which was under the charge of Miss Mackie. Mr. G. N. Rawlence as Steward had charge of this department besides assisting in the Tests, and Mr. Reed with the assistance of Mr. Counsell had again charge of the purchase of the Milk and kept the accounts of the Sales of Produce.

#### GOATS' MILKING CLASSES.

The Goats were divided into two Classes ; Class 172 for quality (butter fat only) and quantity and lactation, two Milkings ; Class 173 for quantity and lactation, three milkings. For Class 172 there were 22 entries, but two were absent. For Class 173, 19 entries, and again two were absent. All goats were stripped at 6 p.m. May 28th, both Classes milked at 6 a.m. and 6 p.m. on the 29th. and Class 173 milked for the third time at 6 a.m. on the 30th. The weighing of the milk was undertaken by Mr. G. N. Rawlence, and the Testing of the milks in Class 173 was carried out by Mr. W. H. Hopkins. Points were awarded on the scale laid down by the British Goat Society. In addition to prizes offered by the Bath and West Society, a Challenge Certificate was given by the British Goat Society for the best Dual Purpose Goat over 2 years that had borne a kid and had entered in Class 172 as well as in an Inspection Class on points gained in both classes. The Tables on pages 108-109 give the result of these Milking Classes and the winner of the Challenge Certificate. It should be noted that Miss C. Chamberlain's goat, "Whimsical of Westons," has beaten all

previous records in having given 21 lbs. 6 oz. of Milk, with an average Butter Fat 4.2, in 24 hours.

The préparation of the tables and working out the results of Tests both for Milk and Goats were entirely carried out by the Earl of Radnor and Mr. G. N. Rawlence, the latter being assisted by Messrs. T. Hall and Shallcross, members of his staff at Salisbury.

I am very much indebted to all these gentlemen for the great assistance given by them.

I also desire to thank Miss Taylor, Miss Bray and all the Dairy Staff and Mr. Read and his Assistant for their valuable help.

The work done by Messrs. Lister's foreman and Mr. Simmonds was most satisfactory, and I desire further on behalf of the Society to thank the Somerset and North Devon Recording Society for having again so kindly lent us the services of their Recorder, Mr. W. H. Hopkins, and his plant free of expense except the actual out-of-pocket cost.

## BUTTER TESTS.

## PARTICULARS OF COWS TESTED, YIELDS OF MILK AND BUTTER, AWARDS, ETC.

No.	Exhibitor and Cow.	Breed.	Date of Birth.	Date of Last Calf.
CLASS 121.				
276	Dartington Hall, Ltd., "Dartington Daisy 2nd" .. .. .	S. Devon	1923	12/5/30
277	Dartington Hall, Ltd., "Dartington Pat" .. .. .	S. Devon	3/7/22	26/1/30
279	Dartington Hall, Ltd., "Dartington Tilda" .. .. .	S. Devon	1922	27/2/30
284	Norman D. Miller, "Buckvette Heather" .. .. .	S. Devon	—	9/5/30
286	Seale-Hayne Agricultural College, "Foreman 3rd" .. .. .	S. Devon	—	12/4/30
319	J. Pierpont Morgan, "Longhills Belle 2nd" .. .. .	Shorthorn	13/1/20	20/3/30
403	Viscount Folkestone, "Longford Bloom" .. .. .	Red Poll	23/1/24	2/1/30
404	John George Gray, "Springhill Artless" .. .. .	Red Poll	29/1/22	7/3/30
429	Clement E. Tory, "Eglinton Juno" .. .. .	Ayrshire	30/10/23	27/4/30
443	Capt. F. B. Imbert-Terry, M.C., "Blue Hayes Kiltie" .. .. .	Jersey	25/1/19	3/1/30
444	Capt. F. B. Imbert-Terry, M.C., "Blue Hayes Bannock" .. .. .	Jersey	19/8/22	25/2/30
445	Capt. F. B. Imbert-Terry, M.C., "Blue Hayes White Label" .. .. .	Jersey	23/1/25	6/12/29
446	Sir Harold Mackintosh, "Bradley's Oxford Lilian 3rd" .. .. .	Jersey	17/12/26	3/5/30
462	George Blight, "Rosewarne Buttercup" .. .. .	Guernsey	23/1/22	16/5/30
472	Wm. Thos. Sobey, "Prudence of Perranzabuloe" .. .. .	Guernsey	31/5/25	24/4/30
473	Mrs. Yorke, "Vern Maggie" .. .. .	Guernsey	24/9/25	4/3/30
538	Mrs. Sofer Whitburn, "Graceful" .. .. .	Jersey	27/11/22	4/1/30



## GOAT MILKING COMPETITION FOR QUALITY.

No.	Exhibitor and Goat.	Date of Last Kid.	No. of days in Milk.
CLASS 172.			
706	Miss C. Chamberlain, "Worthy of Westons" .. ..	21/6/29	341
707	Mrs. Morcom, "Saanic" .. ..	6/3/30	83
708	Mrs. Morcom, "Cornish Catch" .. ..	19/2/30	98
709	Mrs. Morcom, "Cornish Jujube" .. ..	2/2/30	115
710	Miss E. Skidmore, "Heddon Sophia" .. ..	8/4/30	50
711	Miss E. Skidmore, "Heddon Spark" .. ..	24/3/30	65
712	Miss E. Skidmore, "Heddon Sabbath" .. ..	24/3/30	65
713	Miss Barnaby, "Feltham Flame" .. ..	15/2/30	102
714	Miss D. Fullerton, "Hamble Dusk" .. ..	11/3/30	78
715	Mrs. Morcom, "Cornish Fortitude" .. ..	28/1/30	120
716	Mrs. Morcom, "Cornish Priscilla" .. ..	11/3/30	78
717	Miss Pope, "Proof of Bashley" .. ..	22/2/30	95
718	Miss Pope, "Pleaser of Bashley" .. ..	18/2/30	99
719	Miss E. Skidmore, "Heddon Saltcellar" .. ..	13/4/30	45
730	Miss C. Chamberlain, "Whimsical of Westons" .. ..	8/5/30	20
731	Mrs. Morcom, "Cornish Jelly" .. ..	6/2/30	111
732	Mrs. Morcom, "Cornish Sorceress" .. ..	8/2/30	109
733	Mrs. N. Summers, "Cobalt Cinxia" .. ..	29/3/30	60
735	Mrs. N. Summers, "Cobalt Calendula" .. ..	13/3/30	76
736	Mrs. N. Summers, "Cobalt Caprice" .. ..	8/3/30	81
737	Mrs. N. Summers, "Cobalt Change" .. ..	8/3/30	81

Challenge Certificate for best Dual Purpose Goat : No. 706.

No. 717—Reserve.

## GOAT MILKING COMPETITION FOR QUANTITY.

No.	Exhibitor and Name of Goat.	Date of Last Kid.	No. of days in Milk.
CLASS 173.			
706	Miss C. Chamberlain, "Worthy of Westons" .. ..	21/6/29	341
707	Mrs. Morcom, "Saanic" .. ..	6/3/30	83
708	Mrs. Morcom, "Cornish Catch" .. ..	19/2/30	98
709	Mrs. Morcom, "Cornish Jujube" .. ..	2/2/30	115
711	Miss E. Skidmore, "Heddon Spark" .. ..	24/3/30	65
712	Miss E. Skidmore, "Heddon Sabbath" .. ..	24/3/30	65
714	Miss D. Fullerton, "Hamble Dusk" .. ..	11/3/30	78
715	Mrs. Morcom, "Cornish Fortitude" .. ..	28/1/30	120
716	Mrs. Morcom, "Cornish Priscilla" .. ..	11/3/30	78
717	Miss Pope, "Proof of Bashley" .. ..	22/2/30	95
718	Miss Pope, "Pleaser of Bashley" .. ..	18/2/30	99
730	Miss C. Chamberlain, "Whimsical of Westons" .. ..	8/5/30	20
731	Mrs. Morcom, "Cornish Jelly" .. ..	6/2/30	111
732	Mrs. Morcom, "Cornish Sorceress" .. ..	8/2/30	109
733	Mrs. N. Summers, "Cobalt Cinxia" .. ..	29/3/30	60
735	Mrs. N. Summers, "Cobalt Calendula" .. ..	13/3/30	76
736	Mrs. N. Summers, "Cobalt Caprice" .. ..		

## GOAT MILKING COMPETITION FOR QUALITY.

Yield of Milk.			Butter Fat.		Points.				Award.
a.m.	p.m.	Total.	% a.m.	% p.m.	Milk	Lactation.	Butter Fat.	Total.	
lbs. ozs.	lbs. ozs.	lbs. ozs.							
5 7	5 4	10 11	4.3	4.1	10.68	5.0	8.97	24.65	Reserve.
4 5	3 13	8 2	3.7	4.1	8.12	.7	6.33	15.15	
5 8	4 11	10 3	3.5	3.6	10.18	.9	7.23	18.31	
6 10	6 1	12 11	4.9	4.8	12.68	1.2	12.30	26.18	Second Prize.
6 14	6 10	13 8	3.3	3.4	13.50	.1	9.04	22.64	
5 5	5 6	10 11	4.1	4.0	10.68	.4	8.65	19.73	
4 11	4 4	8 15	4.5	4.1	8.93	.4	7.68	17.01	Third Prize.
5 0	4 12	9 12	3.6	3.4	9.75	1.0	6.82	17.57	
5 1	5 3	10 4	3.6	3.9	10.25	.6	7.69	18.54	
4 5	4 0	8 5	4.0	4.7	8.31	1.3	7.23	16.84	
4 8	4 6	8 14	3.7	4.1	8.87	.6	6.92	16.39	
6 6	7 0	13 6	3.5	4.5	13.37	.9	10.70	24.97	
8 7	8 2	16 9	2.3	2.6	16.56	.9	8.11	25.57	
								-2.00	
								23.57	
6 1	5 11	11 12	3.7	3.9	11.75	Nil	8.93	20.68	
11 2	10 4	21 6	3.8	4.6	21.37	Nil	17.95	39.32	First Prize.
5 6	5 3	10 9	4.1	4.1	10.56	1.1	8.66	20.32	
4 6	4 5	8 11	3.9	4.0	8.68	1.1	6.86	16.64	
5 0	4 9	9 9	4.3	4.9	9.56	.3	8.80	18.66	
5 2	4 11	9 13	4.4	4.7	9.81	.6	8.93	19.34	
5 15	5 12	11 11	3.9	4.3	11.68	.6	9.58	21.86	
6 7	6 2	12 9	3.3	3.6	12.56	.6	8.67	21.83	

## GOAT MILKING COMPETITION FOR QUANTITY.

Yield of Milk.				Points.			Award.
a.m.	p.m.	a.m.	Total.	Milk.	Lactation.	Total.	
lbs. ozs.	lbs. ozs.	lbs. ozs.	lbs. ozs.				
5 7	5 4	5 2	15 13	15.81	5.0	20.81	Reserve.
4 5	3 13	3 14	12 0	12.00	.7	12.70	
5 8	4 11	4 9	14 12	14.75	.9	15.65	
6 10	6 1	6 4	18 15	18.93	1.2	20.13	Third Prize. Second Prize. First Prize.
5 5	6 10	5 12	17 11	17.68	.4	18.08	
4 11	4 4	4 2	13 1	13.06	.4	13.46	
5 1	5 3	4 14	15 2	15.12	.6	15.72	
4 5	4 0	4 1	12 6	12.37	1.3	13.67	
4 8	4 6	4 8	13 6	13.37	.6	13.97	
6 6	7 0	6 15	20 5	20.31	.9	21.21	
8 7	8 2	7 14	24 7	24.43	.9	25.33	
11 2	10 4	9 15	31 5	31.31	Nil	31.31	
5 6	5 3	5 12	16 5	16.31	1.1	17.41	
4 6	4 5	4 4	12 15	12.93	1.1	14.03	
5 0	4 9	4 15	14 8	14.50	.3	14.80	
5 2	4 11	5 0	14 13	14.81	.6	15.41	
5 15	5 12	5 13	17 8	17.50	.6	18.10	

## X.—AGRICULTURAL EDUCATION AND RESEARCH AND RURAL EDUCATION AND HANDICRAFTS.

*By H. M. Cundall and A. L. Hobhouse, Stewards.*

The various exhibits included in this Department of the Torquay Show were more than usually successful, and provided visitors to the Show with opportunities to study the latest results in Agricultural Education, Research, and Craftsmanship. Following the practice of recent years, the Society's aim was to produce a combined display illustrating Agricultural Research and Rural Science in all its branches. Their thanks are due to the various local authorities, colleges and associations who co-operated so successfully in both sections.

### AGRICULTURAL EDUCATION AND RESEARCH.

This section was the combined work of the Devon County Agricultural Committee, Seale Hayne Agricultural College and the National Fruit and Cider Institute, Long Ashton. Among many interesting and instructive exhibits the following subjects call for special attention.

**IMPROVEMENT OF GRASS LAND.**—The problem of improvement of pastures and laying down to grass has had special attention in the County of Devon, and a feature of the exhibit was a collection of turves, cut from the many experimental centres in the County to show the effect of phosphatic manuring on old leys. Generally speaking there is no doubt that the greatest deficiency of old pasture lands is in phosphates, and on the heavier types of soil basic slag has had a good effect. Mineral phosphates, which are cheaper per unit, come a very near second at many centres. On the other hand, on the lighter types of soils, superphosphate has acted much better than slag, while a mixture of superphosphate and steamed bone flour has had extraordinarily good results on some of the poor moorland-soils. As every farmer knows, manuring alone is not everything and the effect of draining, grazing, mechanical treatment (harrowing), and other features of management which count so much if the best results are to be obtained, were illustrated by turves from various parts of the County.

**SEEDS MIXTURES.**—With regard to laying down to grass, it was shown that the results of seeds mixture trials in Devon had more than repaid anything spent on agricultural education. Among the turves on view at the Show were some showing the advantages of up-to-date and simple seeds mixtures, and the value of including one pound of wild white clover in three years' mixtures was clearly demonstrated.

General mixtures recommended were as follows :—

**ONE YEAR'S LEY.**

<i>For Hay Mainly.</i>		<i>For More Spring Keep and Aftermath.</i>	
18 lbs.	Perennial Ryegrass.	14 lbs.	Perennial Ryegrass.
5 „	Late Flowering Red Clover (Suffolk).	4 „	Italian Ryegrass.
2 „	Trefoil.	4 „	Late Flowering Red Clover (Suffolk).
1 „	Alsike.	2 „	Broad Red Clover.
1 „	Dutch White Clover.	1 „	Alsike.
		1 „	Dutch White Clover.

**THREE YEARS' LEY.**

<i>For Hay Mainly.</i>		<i>Where More Early Keep is required.</i>	
16 lbs.	Perennial Ryegrass.	12 lbs.	Perennial Ryegrass.
10 „	Cocksfoot.	4 „	Italian Ryegrass.
4 „	Timothy.	8 „	Cocksfoot.
4 „	Late Flowering Red Clover (Suffolk).	4 „	Timothy.
1 „	Trefoil.	3 „	Late Flowering Red Clover (Suffolk).
1 „	Wild White Clover.	2 „	Dorset Marl.
		1 „	Alsike.
		1 „	Dutch White Clover.
		1 „	Wild White Clover.

**WOOL MARKETING.**—A special exhibit dealing with the Wool Marketing Campaign which is being undertaken by the County Agricultural Committee was also staged. The main object of this exhibit was to demonstrate the damage caused to wool and the financial loss to farmers through bad packing and the use of injurious colourings, etc.

Badly packed fleeces demonstrated injury due to dockings in fleeces, and fleeces sheared before docking, dirt and dung having afterwards to be hand picked out of the wool. Fleeces tied with binder twine or cord get pieces of fibre into the wool, which are exceedingly hard to detect prior to the cloth being woven, and have to be carefully hand picked out. A perfectly packed fleece was exhibited, showing the correct method of tying, using a bind made of wool. Samples of dirty wool were exhibited, being contaminated with chaff, leaves, dead grass and other foreign matter,



all of which have to be hand picked out. A sample was also shown of this wool after hand picking. The exhibit included black and white lamb's wool packed separately, and also mixed in packing, as one so often sees, the object being to demonstrate the expensive process which falls upon the buyer who has to pick every strand of black wool from the white before using the wool.

An exhibit was shown of tar brands which had been clipped off fleeces and constituted a waste product of very little value, owing to the impossibility of scouring the tar out. A specimen was also shown of the new harmless marking fluid, recommended by the British Research Association, for the woollen and worsted Industries, which was experimented with on sheep farms in Devon in 1929, with satisfactory results. This branding fluid scours out of the wool perfectly, at the same time wearing very much better than tar during the twelve months' exposure to the weather. Specimens were also shown of the fluids made up direct from prescriptions of the Association and made up commercially on behalf of the Association under the name of "Economic."

A large number of samples of wool treated with fly powders containing colourings were also exhibited, and it was clearly shown that in a number of cases the colourings used did not scour out of the wool, but seriously injured it, making it useless to the white woollen goods trade, and confining the extent or range of dyes which a manufacturer could use. Samples of harmless fly powders were also shown. Also exhibited were samples of wool marked through the use of machine oil and colourings such as Redding or Lamp Black being used on the tup, together with samples of a harmless colour both before and after scouring.

**HORTICULTURE.**—The horticultural exhibit in this section contained many features of interest to market gardeners and fruit growers as well as farmers. Specimens of various pests and diseases were shown, and in addition up-to-date and improved methods of packing flowers, fruit and vegetables were demonstrated in a practical manner, a special feature being made of the fact that complete control of Scab in apples could be obtained by carrying out a comprehensive spraying programme. A plot was laid out in front of the stand and a series of plum, pear and apples planted showing the different stages in the formation of the various types of trees usually grown from the graft or bud up to a four or five years old tree. Budding, grafting and pruning demonstrations were carried out at intervals during each day of the Show, and attracted considerable attention. Strawberry plants were included

in the fruit plot to show the effect of planting out runners early in the season.

**CLEAN MILK DEMONSTRATIONS.**—Three types of cow stalls and fittings were erected, as well as a model dairy complete with cooler, bottling apparatus, up-to-date steamer and washing apparatus. This exhibit aimed at showing that although methods rather than buildings are the secret of successful milk production, buildings and proper equipment are a great help in decreasing the labour of keeping the cows clean and ensuring the perfect cleansing of utensils.

**SEALE HAYNE AGRICULTURAL COLLEGE** contributed a series of instructive exhibits from field and laboratory in agricultural chemistry, economics and biology, together with some interesting models of farm implements and farriery specimens.

**SHEEP SHEARING COMPETITIONS** took place on three days, in front of the Agricultural Tent, and served to demonstrate to a large number of the public the traditional skill and proficiency of the Devon shearer.

**LEAF SCORCH OF FRUIT TREES.**—An outside plot was staged by Long Ashton, demonstrating Leaf Scorch, the most prevalent nutritional disorder of fruit-trees which faces Fruit-growers in this country. This disease is not caused normally by any organism but is due to defective nutrition, associated with Potassium starvation within the plant, causing a greater amount of water to be transpired from the leaves than the amount absorbed by the root system. In the majority of cases Leaf Scorch can be controlled by applying regular dressings of Potassium.

**DEVON BEE-KEEPING ASSOCIATION** were represented by an exhibit of Bee Apparatus in this Section; they also provided in a separate tent an attractive display of honey, contributed by a large proportion of their members.

#### **RURAL EDUCATION AND HANDICRAFTS.**

This section was organised by the Education Committees of the Devon County Council, Torquay and Exeter, and contained a very complete and striking collection of the work done by scholars in Elementary and Secondary Schools throughout the county. As in previous years, the exhibits were classified into subjects and all work in each subject was collected together, the Secondary School exhibits in each subject following immediately after those items sent in by the Elementary Schools, so that the standards of work reached at different ages was fully evident.

The following Handicrafts were included in this section :— Woodwork, Metalwork ; Needle and other work for girls ; Mothercraft ; Art ; Rural Science and Nature Study ; Agricultural Charts ; Local History and Geography ; Gardening. The Torquay and neighbouring schools provided a rota of teachers throughout the Show who were available for supervising, and to explain the exhibits to visitors. In the front of the tent a model School garden was laid out, and apparatus for outside school work was on show.

*University College, Exeter*, staged an ambitious and well planned Exhibition, in a special Pavilion, designed to illustrate the advanced work and research which is carried out at the College at the present time.

The following departments and subjects were represented :—

- Botany : Sterilisation of Soils and Bark-ringing of fruit trees.
- Physics : Measurement of temperature of Soil : Sound ranging.
- Chemistry : Silver Mirrors deposited chemically : Indigoid Vat Dyes.
- Geology : Rocks and Fossils representing various ages and illustrated from local specimens.
- Economics : Relative International position of British Agriculture.
- Mathematics.
- Geography : Survey of Great Britain and the South West England in particular.
- Zoology : General exhibit of animals causing disease in farm stock. Demonstrations of the anatomy and physiology of farm and other animals.
- Education : Arts and Crafts, handwork done by women students. Psychological apparatus for testing intelligence and aptitude of pupils : Speech training.

#### MINISTRY OF AGRICULTURE AND FISHERIES.

The central feature of the Ministry's Pavilion was the National Mark Hall, where the application of the National Mark to those commodities brought within the scope of the scheme to date was demonstrated.

In the Pig Marketing demonstration an attempt was made for the first time to show pigs and carcasses graded to tentative specifications best suited to the bacon and miscellaneous trades.

The Cereal Marketing Section demonstrated the need for commercial standards for home-grown grain to be used in the production of standard commodities such as National Mark all-English Wheat, Flour and Malt Products. These exhibits produced numerous enquiries from the farming communities, from traders and from the general public.

## XI.—THE FORESTRY PAVILION AT TORQUAY.

*By The Hon. J. W. Best, O.B.E.*

The Exhibition of Forestry at Torquay was very satisfactory and the response from exhibitors better than for some years past, not only in the number of entries but in the quality of the material shown and the way in which it was staged for the public view. Some exhibitors have been very steady in their attendance each year and although Messrs. Constance's usual display was missing, we welcomed other old friends and received with particular pleasure exhibits from entirely new sources.

H.R.H. The Prince of Wales, Dartington Hall, Ltd., Fortescue Estates Company, The Torquay Corporation, and the Seale Hayne Agricultural College all sent specimens new to our Pavilion, which added greatly to the usual attractions of other years.

The general judging was carried out by Professor Pritchard, and the judging of the gates by Col. Kennedy Shaw. The Society owes its thanks to these two gentlemen for the able manner in which they carried out their duties.

Class I, for a general collection illustrative of Forestry had three outstanding exhibits.

That of H.R.H. The Prince of Wales, from the Duchy Estate, well merited the Gold Medal which was awarded it. It included specimens of foliage and examples showing the uses to which prevalent species, such as alder, birch, beech and ash can be profitably put. There was a series of exhibits to show the manufacture of match sticks from aspen and pine ; and another series illustrating by specimens the different stages in the preparation of artificial silk from spruce wood. Possibly the most attractive exhibit to the public was the case of beautiful silver fox pelts raised on Dartmoor, which showed that first-class furs can be raised as far South as Devonshire.

The Dartington Hall exhibit which included specimens of seed trees, transplants, foliage, home-grown timber and examples of damage by insects, fungi, etc., was worthy the great pains taken to stage a first-class show. The live specimens of *Hylobius* beetles, doing their fell work, attracted much attention.

The Torquay Corporation exhibits in this Class, put up by Mr. Samuel Chapman, showed what a great corporation like Torquay

can do when engaged on the scientific forestry essential to the preservation of water catchment areas.

Class II, for Longitudinal Sections through young coniferous trees was a new class, and the exhibits justified its introduction. The object of the class was to encourage those in charge of young coniferous plantations to carry out thinning and general tending, so as to produce a timber of uniform growth. There were seven exhibits, the Silver Medal going to the Torquay Corporation, and the Bronze Medal to Dartington Hall.

There were no entries in Class III.

Class IV produced four interesting exhibits. The Silver Medal was awarded to Sir Henry Hoare, for a most interesting display of coniferous foliage. The variety of the collection was remarkable, and the specimens were beautifully mounted. The Bronze Medal in this class was awarded to H.R.H. The Prince of Wales. The object of this class is, of course, educational, and as was to be expected, the exhibit from the Seale Hayne Agricultural College carried out this purpose very carefully. Although the actual number of specimens was comparatively small, the arrangement of the pines into five needle, three needle and two needle varieties was most instructive to a public which often does not realise that the number of needles in a whorl is one of the best means of identifying individual species in a rather difficult group of trees.

It is sometimes said that there are so few Forest Working Plans in existence for private estates in England and Wales that no good purpose is served by having a class for them at agricultural shows. Indeed, the Bath and West is the only Society which encourages the scientific preparation of working plans in this way, although it is generally admitted that working plans are essential to large scale forestry, and that the educational value of a few exhibits is considerable. This year in Class V no less than five plans were exhibited, which certainly justifies the establishment of the class. The Silver Medal was awarded to the Torquay Corporation.

In Class VI there was a very nice piece of Larch shown by Sir C. H. Cave, Bart. The English Forestry Association put up a good collection of specimen seeds and of young trees, mostly in pots. The Forestry Commission as usual put up a very good show of instructive Forestry showing the different stages of growth in some of our more important forest trees. A specimen of Sitka Spruce, 80 years old, showed the possibilities of this species. Then again

the exhibits of the direct sowing, in the forest, of Maritime Pine, on Wareham Heath, showed what an important factor the varying conditions in soil can be.

In Class VII there were three very instructive exhibits. The Silver Medal was awarded to The Great Western Railway for their specimens of Pine and other timber, impregnated under pressure, which had been in use for long periods.

When piles can (after creosoting under a simple process) be left in the ground in a damp climate for thirty-five years, and be taken up again in as sound a condition as when put down, there can be no question that creosoting is a very sound proposition. And this is what the Vivod Estate showed with its specimens of Birch, Spruce, Scotch Pine and Larch. This exhibit well merited the Bronze Medal awarded it.

Class VIII had four excellent entries. The Silver Medal was given to the Great Western Railway for a very good show of Home-grown Timber used for railway purposes. The Railway Company is to be congratulated on such an instructive display. Dartington Hall (Bronze Medal) ran the Great Western close in the quality of its exhibit. The articles worked-up in this case were of a varied nature, including chairs, lamp stands, quoits, clubs, etc. Both these exhibits showed how much of our everyday requirements can be produced from home-grown material. Sir C. H. Cave, Bart., showed a pair of Ash cart shafts, and these were the best pieces of ash that the writer has seen. The judge awarded this entry a Very Highly Commended card.

There were nine excellent Field Gates shown in Class IX, outside the Pavilion. The Fortescue Estate Company was awarded the silver Medal for an oak gate, well-bolted and of solid construction at £2 4s. 6d. complete. Capt. Best was awarded the Bronze Medal for a Larch gate, specially strengthened with iron angles, at a total cost of £2 13s. 6d. The other entries in the class were all excellent.

In the Hunting Gate, Class X, the Fortescue Estate Co. again took first prize for a strong oak gate, easily opened and closed from horseback, at the price of £1 6s. 6d. The second prize went to Mr. Samuel Chapman, of the Torquay Corporation, for an oak gate, opening both ways, and finished complete, at a cost of £3 16s. Dartington Hall, Ltd., secured the third place in a very good class.

There were no exhibits in the Wattle Hurdle Class, and this year Lobster Pot Making was selected for the outside competition. Owing to the failure of the Dorset Lobster Pot Makers, the entries

were limited to seven men from Devon and Cornwall. The class raised a lot of interest, not only in H.R.H. who inspected the work while in operation, but in the general public and the Press. It was probably the first competition of its kind and has since been followed by another, run on the same lines, in Cornwall. Thanks to Mr. Hutchinson, of Long Ashton, from whom the idea originated and who supplied the willows, the men had excellent material at their disposal, and there is no doubt that when the Society holds another show in a suitable locality the entries in this competition will be much larger. Mr. J. Westlake was first, Mr. W. Ware second and Mr. H. Browse third in the awards. The judge in this class, was Mr. Newton, who was assisted by Rev. A. Boscawen, and the general agreement on the fairness of their awards justified them in their position. The Society thanks them for their assistance, as well as that of the other judges.

## XII.—THE EXHIBITION OF CIDER AT TORQUAY.

*By E. W. Farwell, Steward.*

The entries at the Torquay Exhibition in 1930 numbered 142 as compared with 99 at Swindon in 1929 and 145 at Dorchester in 1928, the classes as usual being open to growers and makers, with one additional class for exhibitors whose main occupation is farming, and another class for Yeoman or Tenant Farmers residing in Devon. The prizes for the latter class were generously offered by the Devon County Agricultural Association.

Mr. Stafford Weston, of Much Marcle, Herefordshire, was the Judge appointed by the Society, and he made his final awards on the first day of the Show, after having made a preliminary selection a week previously.

The selected samples were submitted to Dr. J. A. Voelcker, C.I.E., M.A., F.I.C., for analysis, and particulars of these are set out in the accompanying table, together with the specific gravity of the juice as supplied by the exhibitors. There were two absent entries, and one sample in a dry class had to be disqualified for being of too high specific gravity.

The following are the Judge's comments on the exhibits :—

"The Ciders which I had the honour of judging at the Society's Show at Torquay were, on the whole, quite good, although there were no exhibits of exceptional merit. The bulk of them were useful commercial Ciders, in good condition, and of a nice colour.

There having been in all 142 lots to adjudicate upon, I felt I was confronted with a somewhat difficult task, but owing to the great advantage of having a preliminary judging, and also the kind co-operation and assistance of Major Farwell, the Steward, it worked out much easier than anticipated, and I felt I had quite satisfied my own judgment when the final awards were made.

I will now take the Classes in rotation :—

Class 212, The Novices' Class, was a fairly even lot, of very fair quality.

Class 213, open to Devon Farmers, was very creditable, practically all the entries being in good condition, and of a sound character. I feel sure that the technical instruction given in the County was reflected here.

Class 214, open to exhibitors whose chief occupation is Farming, was mainly composed of entries in the previous classes, the first and second prize-winners being outstanding.

Class 215, for Dry Cider in Cask, was quite good, and there was no difficulty in picking out the first prize.

Class 216, for Dry Cider in Bottle made in 1929. This was a somewhat uneven lot, the prize-winners being well in advance of the other exhibits.

Class 217, the Open Class for Draught Cider made in 1929, was generally a very good lot, and there were some very nice Ciders, especially those that gained a mention.

In the Open Class for Bottled Cider made in 1929, No. 218, the first prize-winner was full-bodied and rich, although the second and third awards ran it very closely.

The Old Cider Class, No. 219, was the smallest entry, and after the first and second prize-winners, was rather disappointing.

I feel I cannot conclude this brief report without expressing my appreciation to the Attendant, for the excellent arrangements."



## RESULTS OF ANALYSIS.

<i>No.</i>	<i>Sp. Gr.</i>	<i>Solids.</i>	<i>Percentage of Alcohol.</i>	<i>Acidity.</i>	<i>Sp. Gr. of Juice</i>
2	1.027	7.92	3.20	.39	1.030
3	1.028	8.40	3.71	.70	1.062
4	1.028	8.25	3.42	.57	—
5	1.026	7.42	2.22	.64	1.048
6	1.010	4.38	5.18	.60	1.058
7	1.030	8.25	1.95	.54	—
9	1.025	7.00	1.75	.54	—
11	1.037	10.00	2.02	.70	—
14	1.023	6.75	2.64	.50	1.048
15	1.045	12.45	3.13	.50	—
20	1.033	8.72	1.27	.57	—
21	1.016	5.75	4.65	.40	1.028
23	1.018	5.95	3.92	.37	—
24	1.036	9.90	2.16	.67	—
27	1.012	5.00	5.93	.50	—
34	1.023	7.58	4.65	.57	1.060
38	1.015	5.88	5.70	.84	1.062
39	1.015	5.70	4.80	.70	1.061
41	1.015	5.50	4.80	.50	1.054
44	1.012	5.50	6.71	.67	1.075
49	1.014	5.75	5.93	.77	1.061
52	1.015	5.75	4.73	.40	1.028
54	1.013	5.08	4.80	.50	1.055
56	1.014	5.40	4.95	.70	1.050
57	1.016	5.65	4.73	.80	1.055
61	1.013	5.65	6.71	.70	1.075
64	1.028	8.20	3.13	.57	1.060
65	1.032	8.65	1.48	.60	1.058
69	1.027	8.58	4.65	.87	1.064
73	1.019	6.25	4.22	.52	1.048
79	1.025	7.40	2.92	.57	1.048
82	1.028	7.92	2.22	.54	1.065
83	1.026	8.00	4.36	.74	1.060
92	1.036	9.90	2.16	.79	1.059
97	1.024	7.90	5.18	.77	1.068
102	1.023	6.72	2.57	.50	1.048
105	1.023	7.60	5.03	.57	—
107	1.016	5.60	4.36	.64	1.050
108	1.012	5.25	5.93	.57	1.064
111	1.023	7.30	4.00	.54	1.058
113	1.027	8.60	5.03	.60	1.065

### XIII.—ANNUAL REPORT ON THE SOCIETY'S GENERAL OPERATIONS.

*By F. H. Storr.*

The Annual General Meeting of Members was held on Friday, May 30th, 1930, in the Council Pavilion in the Show Yard, at Torquay. The President, The Right Hon. The Lord Mildmay of Flete, P.C., T.D., was in the chair, and there were present:—Lt.-Col. The Lord Wynford, D.S.O., Capt. W. Best, Mr. H. M. Cundall, I.S.O., F.S.A., Mr. H. B. Napier and Mr. A. F. Somerville (Vice-Presidents), Viscount Folkestone, Sir F. B. Beauchamp, Bart., Lt.-Col. Sir C. W. Miles, Bart., The Hon. J. W. Best, O.B.E., the Rev. A. T. Boscawen, Lt.-Col. E. Lewis, Major E. W. Farwell, Major J. A. Garton, M.C., Major A. H. Gibbs, Major J. F. Shelley, Capt. F. B. Imbert Terry, M.C., Capt. L. T. E. Llewellyn, Dr. J. A. Voelcker, C.I.E., Messrs R. Bruford, E. C. Cave, W. Drew, H. E. Dulcken, A. Hardwick, K. C. Helyar, A. L. Hobhouse, H. J. Kingwell, H. H. Lear, G. Lipscomb, C. M. F. Luttrell, T. H. Pearce, P. W. Petter, H. L. Prichard, E. Pritchard, J. I. Storrar and A. R. White, O.B.E. Capt. W. D. McKinnon, representing the Torquay Local Committee, was also present.

The Minutes of the last Annual General Meeting were read and confirmed. On the motion of Major J. F. Shelley, seconded by Mr. R. Bruford, it was unanimously resolved that His Grace the Duke of Beaufort be elected President of the Society for the ensuing year. It was moved by Lord Wynford, and seconded by Major E. W. Farwell, that the Rt. Hon. The Lord Mildmay of Flete be elected Vice-President of the Society. Mr. H. B. Napier proposed, and Capt. W. Best seconded, that Mr. C. M. F. Luttrell be also elected a Vice-President. The motion as amended was carried. Lt.-Col. E. Lewis moved, Mr. H. E. Dulcken seconded, and it was carried, that the gentlemen nominated by the Council be elected Members of Council for the years 1930-32.

Mr. G. Lipscomb, in proposing that the Annual Report of the Society be approved and printed in the Society's Journal, said that it was an epitome of successful administration in the past, and gave good grounds for hope of equal success in the future. He wished especially to draw attention to the kindness of the Hon. Mrs. Smyth in placing at the disposal of the Society the Park at Long Ashton, for the purpose of the 1931 Show. It would provide one

of the most picturesque and convenient sites that the Society had employed. Viscount Folkestone, on the third paragraph of the report, explained the course of the negotiations for amalgamation with the Royal Counties Society, and emphasized the importance of informing the public of these facts, and making clear the responsibility for their breakdown. The Chairman thanked Viscount Folkestone for his explanation of the situation, and Mr. E. Pritchard seconded the motion, which was carried. The following report being approved :—

“It is a matter of sincere congratulation that in visiting the County of Devon after an interval of eight years, the Society has had the honour of welcoming H.R.H. The Prince of Wales to its annual Show. His Royal Highness, though President of the Society during its last visit to the County, was unable to be present at the Plymouth meeting owing to his Imperial engagements, but his acceptance of the Presidency in 1923 and his visit to the Dorchester Show have maintained the support which has been so constantly given to the Society by members of the Royal family.

The Society was fortunate in securing a site for the Show so near to the centre of population at Torquay, and has received whole-hearted support from His Worship the Mayor, the Corporation, the members of the Local Committee, and from the Hon. Secretary (Capt. W. D. McKinnon), who has so ably carried out the many duties entrusted to him. Members will welcome the arrangement for affiliation for the year with the Devon County Agricultural Association, which has made a generous contribution to the prize fund, and whose officials have done all in their power to help forward the arrangements for the Show. Your Council wishes also to take this opportunity of showing their appreciation of the active assistance from the County Agricultural Committee and its staff ; an extensive programme of competitions has been arranged in those branches of agriculture which are the subject of County Council instructional classes, and an excellent exhibit staged to demonstrate the results of the Committee's field work. With regard to the duration of the Show, your Council considered that the effect of a four-day Show had not been sufficiently brought out by the Swindon meeting, and therefore decided that the experiment should be continued this year.

A matter of great importance, and one which might have affected the organization of the Society, has been under discussion since October of last year until the beginning of this month. It was represented to Council that in the interest of agriculture in general,

and in particular of exhibitors of all classes, it was highly desirable that the number of large agricultural shows should be reduced. This policy was so clearly desirable in itself, that your Council decided, in spite of the obvious difficulties, to approach the Royal Counties Society with a view to amalgamation. A joint committee was formed, which, after several meetings, put forward proposals intended to prepare the way for amalgamation at a later date. Your Council agreed to recommend the adoption of these proposals by the general meeting of members, but they were defeated by a majority when brought before the Council of the Royal Counties Society. Members will at any rate appreciate the fact that your Council has done its utmost to reach a result so clearly of advantage to exhibitors and the general public.

Several matters of national importance have engaged the attention of Council during the past year. The Leathersellers Company asked for the co-operation of the Society in inaugurating a campaign for the eradication of the Warble Fly in the country. The Society's Veterinary Inspector was appointed as their representative on the committee formed for this purpose; a scheme of operations has now been drawn up, which has secured the support of the Ministry of Agriculture and Fisheries and of some County Councils, and your Council have voted a grant in aid of the necessary expenses. The Prime Minister and the Ministry of Agriculture have further been approached on the question of the supply of home-grown beef for the Army, in order to urge on them the importance of this question to all farmers. Mention should also be made of the report of the Society's Consulting Chemist on the result of the Fertilisers and Feeding Stuffs Act (1926) in which he points out that the Act, though it has been beneficial in most respects, does allow of the importation of foreign meals of a quality inferior to that permitted to British millers, and of small value to the farmer. With regard to the agricultural work initiated by the Society, a final report on the eradication of bracken will appear in the next issue of the Journal. It will be accompanied, it is hoped, by a digest of the results obtained at Longleat bearing on the intensive management of grassland, so that the records will contain information on a wide variety of pastures.

A fresh effort has been made to secure the installation of a small limestone crushing plant in an area where supplies of suitable stone are found and where there is likely to be a ready market for the product. There are hopes now that this may be achieved, but the Experiments and Education Committee will be grateful for

further suggestions in case those now being considered fall through. A fresh programme of demonstrational of experimental work is being considered for adoption when the present programme has been brought to a conclusion.

The Society has to deplore the loss during the past year of no less than four members of Council. Lord Blythswood, a Vice-President, was one of its firmest friends in South Wales, as was Mr. S. J. Knight in the home area. Mr. W. Ashcroft will be long remembered as an able Steward of Stock and Experiments, and as the Society's representative on the governing body of the Wye College. Mr. J. H. Ismay was well known for his keen pursuit in agricultural interests at Iwerne. The losses by death among members of the Society have also been unusually heavy, and the total membership now stands at 1,195, a reduction of over 50 since the last general meeting, though there has been an increase since the list was published in January, but your Council hopes that every opportunity will be taken of securing new members.

Owing to the kindness of the Hon. Mrs. Smyth, of Ashton Court, an excellent site has been found for the 1931 Show at Bristol. The site on Clifton Downs, which has been used on many occasions, is now so fully employed in providing recreation grounds that it is no longer available for Show purposes. The ground at Ashton Court will, however, provide an excellent alternative, being easily accessible by road and rail.

Your Council recommends that His Grace the Duke of Beaufort be elected President of the Society for the ensuing year, and that the Right Hon. The Lord Mildmay of Flete, P.C., T.D., be elected a Vice-President of the Society. Council further recommends that the gentlemen named on the agenda paper be elected members of Council for 1930—1932. Viscount Folkestone and Major J. F. Shelley have been appointed as additional Trustees of the Society. In view of the increased importance of cider making in the Society's area, a Cider Committee has been added to the list of standing committees, and it has been decided to confine exhibits in these classes to cider from English apples. Mr. R. Bruce-Ward has been appointed as the Society's representative on the governing body of the South Eastern Agricultural College, Wye, in place of the late Mr. W. Ashcroft. No other changes have been made in the Society's representation."

Mr. H. B. Napier then moved that the thanks of the Society be presented to the Mayor of Torquay and the Local Committee for

their efforts to promote the success of the Meeting, and to the Devon County Agricultural Association for their cordial co-operation. There was sometimes, he said, a difference between the help expected and the help received, but, from the first preliminaries to the opening of the Show, Torquay had shown what true hospitality meant. Mr. A. R. White in seconding the motion, pointed out how greatly the success of the Show depended on the Local Committee, and the motion was carried with acclamation. Mr. C. M. F. Luttrell moved, and Mr. J. I. Storrar seconded, that the thanks of the Society be presented to those gentlemen who had kindly acted as Judges in the several departments.

Viscount Folkestone moved that the thanks of the Society be presented to the Right Hon. The Lord Mildmay of Flete, for the valuable services he had rendered to the Society as President during the past year. Lord Mildmay had taken a keen interest in all the activities of the Society. The past year had been a difficult one in regard to the proposal for amalgamation of which they had now the full report, and the President had done his best with wise advice and help to further the scheme. Mr. A. L. Hobhouse seconded the motion which was unanimously carried. Lord Mildmay in expressing his appreciation of the resolution said that he had to thank the Society for the experience of what such an organisation could do in furthering the interests of agriculture. He congratulated the Stewards on the smooth working of the machinery of the Show, and was happy to say that H.R.H. The Prince of Wales had expressed his appreciation of it. His year of office had coincided with a period of depression in agriculture, but he did not take too gloomy a view of the situation, because he trusted in the character of the British farmer, and because it was at last coming to be recognized that industry could not flourish unless agriculture did so too.

# XIV.—ANNUAL REPORT OF THE CONSULTING CHEMIST FOR 1930.

*By Dr. J. A. Voelcker, C.I.E., M.A., F.I.C.*

The number of samples sent by Members was 10 only, this constituting a marked decline from the 25 samples of 1929. The diminution is largely due to the lamented death of Mr. James Ismay, who, through his agents, Messrs. Rawlence & Squarey, was in the habit of sending samples regularly for examination.

In addition to the 10 samples from Members, there were 41 of Cider analysed in connection with the awards at the Torquay Show of the Society.

The ten samples comprised :—

Cotton Cake	..	..	..	..	..	..	1
Barley Meal	..	..	..	..	..	..	1
Fish Meal	..	..	..	..	..	..	1
Calf Meal	..	..	..	..	..	..	1
Condiment	..	..	..	..	..	..	1
Whey Refuse	..	..	..	..	..	..	1
Waters	..	..	..	..	..	..	3
Stone	..	..	..	..	..	..	1
							10

The Cotton Cake gave the following analysis :—

Moisture	..	..	..	..	..	..	11.78
Oil	..	..	..	..	..	..	4.86
Albuminoids	..	..	..	..	..	..	21.00
Carbohydrates, etc.	..	..	..	..	..	..	37.09
Woody Fibre	..	..	..	..	..	..	19.45
*Mineral Matter	..	..	..	..	..	..	5.82
							100.00
Nitrogen	..	..	..	..	..	..	3.36
*Including Sand and Silica	..	..	..	..	..	..	.96

This cost £7 5s. per ton delivered in Dorsetshire. My report on it was "this is not a good sample; it is lower in oil than most good samples, and the albuminoids also are deficient. In addition it is somewhat 'woolly.' Considering that cake from good, clean, Egyptian seed is now quoted at £6 5s. per ton, ex Mill, I must consider this dear for the quality."

The sample of Barley Meal sent fairly met the description, it containing an immaterial amount of Oats and Wheat, and being free from weed seeds.

The Fish Meal (for feeding purposes) was of a satisfactory nature and price.

A member sent me two samples, one of Calf Meal charged at 30/- per cwt., and the other a Condiment costing 45/- per cwt. As usual, there was nothing in the food constituents, as set out in an analysis, to warrant any such prices from a purely feeding point of view, and these materials have really to be considered as "appetising additions" to staple foods, and to be used only in small quantities. They contain, generally, spices and condiments such as fenugreek, anise, liquorice, gentian, etc., and must be regarded as "fancy" materials and the prices as "fancy" ones.

The Whey Refuse sent was called "Whey Paste," and was stated to cause animals an insatiable thirst. Analysis of it was :—

Moisture	..	..	..	..	..	..	29.77
Fat	..	..	..	..	..	..	3.36
Casein	..	..	..	..	..	..	12.31
*Mineral Matter	..	..	..	..	..	..	11.02
**Milk Sugar, etc.	..	..	..	..	..	..	43.54
							<hr/>
							100.00

\*Containing Common Salt .. .. . 6.83

It will be seen that the amount of salt was considerable.

Three samples of water were sent for examination ; two came from Wiltshire and one from Dorsetshire. Each was rather hard, owing to the presence of lime salts (23 to 30 grains per gallon of solid constituents), but free from anything of harmful nature.

The Stone submitted for analysis was from Dorsetshire. It was comprised mainly of carbonate of lime (75 per cent.), with phosphate of lime  $1\frac{1}{2}$  per cent., and  $\frac{1}{2}$  per cent. of sulphate of lime.



## XV.—THE NATIONAL FRUIT AND CIDER INSTITUTE.

## INTRODUCTION.

*By B. T. P. Barker, Director.*

In accordance with the arrangement begun in last year's Journal this report on the work of the National Fruit and Cider Institute for 1930 will be considerably briefer than those of the preceding post-war years. Reference will be limited accordingly to : (a) a short review of general matters relating to the Institute and its associated centres at Berkeley Square, Bristol, and Campden, (b) a summary of the advisory work of those three centres, which constitute the Department of Agriculture and Horticulture of the University of Bristol, and (c) a few selected papers contributed by individual members of the staff of the Department, illustrating the range of the research investigations.

By reason of new developments, abnormal working conditions due to the meetings of the British Association at Bristol, and various Imperial and International conferences held in this country in 1930, the number and variety of overseas and other visitors to Long Ashton resulting from the latter, and important staff changes, the year 1930 stands distinct from any of its predecessors in the history of the Department. Two changes radically affecting the character of the Department call for mention at the outset on account of their important bearing on working arrangements. They are the reorganisation of the work hitherto carried on at the Campden Research Station, and the alterations affecting the agricultural advisory work necessitated by the resignation of Professor J. A. Hanley, the Chief Agricultural Advisory Officer.

## THE CAMPDEN STATION.

After negotiations with the Ministry of Agriculture and other government departments concerned which have been in progress during the past few years, a new scheme for dealing with the various sides of the work on the preservation of fruit and vegetables centred at Campden has been approved and is now in operation. Under this scheme the Campden Station in future will be concerned solely with research and advisory work relating to the canning of fruit and vegetables in its commercial aspects.

A new feature affecting the financial arrangements for the Campden Station, which has been imposed by the Treasury as a condition attached to the annual government grant, is that the commercial canning industry in this country is called upon to bear a part of the cost of upkeep of the station. In future assistance and advice will only be rendered by the staff to those engaged in the canning industry who become annual subscribers. It is satisfactory to be able to record that the total subscriptions so far promised already exceed the minimum sum stipulated by the Treasury. The new arrangement in respect of the Campden Station itself is fixed for a five-year period, at the end of which the future of the station will be decided in consultation with the government departments concerned and the canning industry. Until that time the station remains a part of the Department of Agriculture and Horticulture of Bristol University with Mr. F. Hirst, M.Sc., as Resident Director, under the general direction of the Head of the Department.

The work relating to the domestic side of the preservation of horticultural produce will be carried on as heretofore by Miss Margaret L. Adams, but her headquarters have been transferred from Campden to the Research Station at Long Ashton. The annual summer courses of instruction, given by her hitherto at Campden, will be held in the immediate future under her direction either at the Royal Agricultural College, Cirencester, which is already associated with the University of Bristol for degree courses in agriculture at Long Ashton.

In addition, the staff at Long Ashton has been strengthened by the appointment of Mr. V. L. S. Charley, B.Sc., to a newly created post for research and advisory work on fruit and vegetable products other than canned goods to enable the limited investigations on that subject previously included in the Campden programme to be extended.

#### THE BERKELEY SQUARE ADVISORY CENTRE.

The second radical change in the Department affects the Berkeley Square Agricultural Advisory Centre at Bristol most closely. On his appointment as Professor of Agriculture at Armstrong College, Newcastle, last July, Professor Hanley resigned his positions as Chief Agricultural Advisory Officer of the University in charge of the Berkeley Square Centre and Principal of the Royal Agricultural College, Cirencester. Following discussion between the University and the Governing Body of the College, it was decided to dis-

continue this dual appointment. Accordingly, Mr. A. W. Ling, M.Sc., has been appointed to succeed Professor Hanley as administrative officer at Berkeley Square, while still retaining his position there as Adviser in Agricultural Chemistry. He will, in addition, be responsible for the advisory work in general agriculture. To relieve him of some of the routine duties of the old post, an Assistant Agricultural Chemist, Mr. R. D. H. Round, B.Sc., (Leeds University) has been added to the staff.

During the year the Berkeley Square staff has been strengthened also by the creation of two further new posts. Mr. J. E. Blundell, M.Com. (Birmingham University), has been appointed Permanent Assistant in Agricultural Economics, and an extension of the work in this subject has thus been made possible. Mr. W. D. Menzies, M.R.C.V.S., has been selected for the second post, that of Veterinary Advisory Officer. He is at present finishing a special course of study in France and is due to come into residence at the beginning of May next. For a long time the need of an advisory officer in this subject has been greatly felt, in view of the many live-stock problems inevitable in an agricultural area of the character of the Bristol Province. The additional grant made by the Ministry of Agriculture for this purpose should be more than justified by the gain to the farmers of the Province through the reduction of live-stock losses due to disease.

There has also been a change in personnel in the Dairy Bacteriology staff at Berkeley Square, Mr. C. A. MacEacharn being succeeded by Mr. C. S. Miles, N.D.D., as Dairy Bacteriologist.

#### THE LONG ASHTON STATION.

At the Long Ashton Research Station, apart from the staff increase already referred to in connection with the Campden rearrangements, the principal change in staff has been brought about by the departure of Mr. J. G. Maynard, M.A., who has held the post of Pomologist since 1924. The vacancy thus created has been filled by the transfer of Mr. T. Swarbrick, M.Sc., Ph.D., from the post of Plant Physiologist, and the appointment of Miss Elsie S. Smyth, Ph.D., to the latter post.

To supplement the work of the Advisory Mycologist and enable the investigations on the control of diseases of asparagus and other vegetable crops in the important market garden areas of the Bristol Province to be extended, provision has been made by the Ministry of Agriculture for the appointment of an Assistant Mycologist.

Mr. J. W. Ewan held that position for a short period in the first instance, and was then transferred to the Ministry of Agriculture staff. Mr. B. O. Mulligan has been appointed as his successor. Arrangements have been made also for an extension of the investigations of the station on insecticides. This has been made possible by a special grant from the Colston Research Committee of the University, which has allocated for that purpose the income from the Mardon benefaction. For a period of one year in the first instance, Mr. J. Bloom, Ph.D. (Leeds), has been awarded a post-graduate studentship to carry out the investigations under the supervision of Mr. F. Tutin, and will begin his work early in 1931.

As anticipated, the unusual plethora of conferences of an imperial and international character of bodies associated directly or indirectly with agriculture and horticulture arranged to be held in this country during 1930 has affected the normal working arrangements of the Department to a considerable extent. The annual meetings of the British Association were held in Bristol during September. Between June and August there were also held in London and elsewhere in this country the International Entomological Conference, the International Botanical Conference, and the Imperial and International Congresses on Horticulture. At all of these the Department was represented by the attendance of various members of the staff and at each, except the International Entomological Conference, one or more papers were contributed by the representatives of the Department.

These meetings also resulted in the influx of an unusual number of visitors to Long Ashton. In the case of the British Association, separate organised parties from the Agricultural, Botanical, and Physiological Sections visited the station. A party of over 120 members of the International Horticultural Congress, representing in all over 30 different countries, also paid a visit. Throughout the summer large numbers of individual visitors from all parts of the world, attending the various conferences, journeyed to Long Ashton to inspect the work in progress, some making a stay extending over several days.

Among other visiting parties during the year mention should be made of one of representatives of overseas Dominions attending the Imperial Conference, which included the Rt. Hon. J. W. Forbes, Premier of New Zealand; Dr. A. C. D. Rivett, Chief Executive Officer of the Australian Department of Scientific and Industrial Research; and Dr. E. Marsden, of the corresponding Department for New Zealand.

During a considerable part of the busiest season of the year, therefore, there was an almost constant call on individual members of the Staff to give such visitors the required attention. At the same time there is no question that the contacts thus established with workers in other parts of the world will more than justify the expenditure of time and attention involved, and will prove of ultimate benefit to the work of the station. In fact this result is already apparent in several instances.

In spite of these abnormal calls the usual round of visiting parties suffered little disturbance. The following list records the organised parties received at the station during the year:—

Cider Makers from Monmouth, Dorset and Worcester.  
 Surveyors' Institution.  
 Cheltenham Growers' Club.  
 British-French Week Visitors.  
 Bradford-on-Avon Gardeners' Association.  
 Bristol Education Committee's Gardening Class.  
 National Cider Institute (Open Day for Members).  
 Evesham and District Market Gardeners' and Fruit Growers' Association.  
 International Horticultural Conference.  
 Great Western Railway Workers' Welfare Union.  
 Messrs. W. D. & H. O. Wills' No. 3 Factory Welfare Committee.  
 British Association (Agricultural, Botanical and Physiological Sections).  
 Staffordshire County Agricultural Education Committee.  
 Port of Bristol Authority Staff Association.  
 Studley Horticultural College Students.  
 Colston's School Scientific Society.  
 Bristol University Mathematics Club.

The Annual Tasting Day on Thursday, May 1st, 1930, proved again a highly successful function. The attendance was probably a record one and was estimated at over 1,500. A feature of the day's proceedings was an address by the Rt. Hon. Lord Noel-Buxton, at that time Minister of Agriculture and Fisheries. He also distributed the prizes to the successful competitors in the Cider Competition Scheme.

During the year the services of members of the staff of the Department have been in frequent request for lectures to meetings of farmers, scientific associations, and other bodies. Educational work of this type has been supplemented by exhibits at several agricultural and other shows, including the following:—

Bath and West Society's Show, Torquay.  
 Three Counties Show, Worcester.  
 Wilts County Show, Trowbridge.  
 Norfolk Horticultural Show, Norwich.  
 Gillingham and Shaftesbury Show, Gillingham.  
 Melplash Agricultural Society's Show, Bridport.  
 Cheltenham Floral Fete, Cheltenham.

Swindon Allotment Holders' Show, Swindon.

Abergavenny Horse Show, Monmouth.

Imperial Fruit Show, Leicester.

Brewers' Exhibition, London.

The Gloucester Federation of Women's Institutes Produce Exhibition.

The Oxford Federation of Women's Institutes Produce Exhibition.

The Warwick Federation of Women's Institutes Produce Exhibition.

Close collaboration with research workers at several other institutions has been maintained as in other recent years.

Each year also sees an extension of the system of field experiments conducted on growers' farms and fruit plantations, and at other suitable centres in various parts of the country. By this means the results obtained in the field under the local conditions at the Research Station are being tested under more varied circumstances and are being applied to commercial conditions. The thanks of the Station are due to all who have provided the necessary facilities : in many cases the personal help given by them has made the successful development of this branch of the work possible.

Acknowledgment too must be made to various post-graduate and other research workers for participation in investigations associated with the research programme of the station. By means of their help problems which otherwise could not have been given attention have been dealt with.

In conclusion, special reference should be made to the striking advance in the volume of advisory work undertaken during the year. Past records have shown a continuous increase in the advisory service of the Department, but on no previous occasion has the number of enquiries advanced to the same extent.

#### **ADVISORY WORK.**

The number of advisory enquiries received during the year under review shows a large increase over the number received for the previous year, and serves further to demonstrate the rapid growth of the advisory activities of the Department which has continued during the post-war period. The increase in the present case has not been confined to one special subject, but no less than five subjects show substantial increases in the numbers of enquiries received, viz. : Agricultural Chemistry, Pomology, Entomology, Mycology, Disease Control Materials and Methods. The increase in Pomology is due to the increased number of enquiries relating to the pomological work of the Long Ashton Institute ; in Entomology a large proportion of the enquiries is in connection with two

special subjects, strawberry diseases and tar distillate washes, and many of the enquiries come from sources outside the Bristol Province; in Mycology the advisory work has been developed during the year by the appointment of a special officer to investigate diseases of vegetable crops, and this has led to a substantial increase in enquiries; enquiries relating to disease control materials and methods have increased greatly during the year in connection with the special investigations relating to spray fluids in progress at Long Ashton.

The following table gives the number of enquiries submitted during the last six years :—

	Year ending September 30th.					
	1925	1926	1927	1928	1929	1930
Gloucester (including Bristol) ..	194	262	183	202	193	301
Hereford .. .. .	88	91	115	97	115	136
Somerset .. .. .	395	276	254	308	300	440
Wiltshire .. .. .	117	175	104	104	139	136
Worcester .. .. .	78	103	168	161	136	244
Other Areas .. .. .	222	309	478	495	721	1025
	1094	1216	1302	1367	1604	2282

Included in the figures under "other areas" are enquiries received from Devon and Monmouth, both of which contribute annual grants to the Long Ashton Institute, and from Dorset, which participates in the Scheme for Local Instruction in Cider-making. None of these counties rank officially as part of the Bristol Province.

This list does not indicate the very numerous enquiries dealt with in personal interviews during survey work, local investigational work, shows, etc., nor those relating to fruit and vegetable preservation and products, which have been dealt with up to the present time by the Campden Station. Also, as in previous years, no figures for enquiries received under the heads of Agriculture, Economics or Dairy Bacteriology have been included, so that the statistics given may be comparable with those of earlier years before those subjects were dealt with.

Special attention should be directed to certain items in the sectional reports which follow.

The Longleat Grazing Experiment has been continued and the manuring of certain of the intensively grazed plots was again made possible as the result of grants from the Bath and West Agricultural Society and the Wiltshire County Council. The data so far obtained

indicate that manuring the intensively grazed plots materially assists the herbage in withstanding the effects of drought. The experiment is to be continued for another season.

A number of samples of herbage have been analysed for iodine content. Whilst work is still in progress, the results available demonstrate the large differences which may exist in the iodine content of herbage from the same area—figures from 6.4 Y's to 177.7 Y's being recorded ( $Y = 0.000001$  gram).

Manurial and cultivation trials in connection with the growing of flax (for fibre production) in the West of England were established in the spring of 1930. The effect of nitrogen on the colour and health of the crop was very marked at nearly all the centres.

A farm account book has been issued by the Department and the use of this book by farmers submitting accounts for analysis has very much simplified the work of the farmer and of the Department. Nearly all the work in advisory economics is in connection with ordinary farms. Only about 2 per cent. of the enquiries received have come from fruit growers and market gardeners.

The work of the Dairy Bacteriologist has increased to a very marked extent. In addition to the usual routine in connection with "clean milk" samples, the Bacteriologist has visited 30 farms and examined nearly 1,000 samples of milk for advisory purposes. The Department is investigating the problem of high counts in milk presumably due to the high temperature of the milk during transit in the summer.

The number of enquiries received in Entomology was extremely large, viz. : 530, and of these 236—approximately 45 per cent.—were from sources outside the Province. The majority of the enquiries related to problems of strawberry culture and the use of tar distillate washes, subjects to which the adviser has given special attention during the past few years.

The adviser in Mycology has undertaken a number of special investigations in connection with vegetable crops in the larger market gardening areas of the Province, notably the Evesham, Pershore, Cheltenham and Bristol areas. He has been assisted in this work from January 1st, 1930, by a special officer, and the appointment of this officer has led to considerable development of the work. The activities of the adviser and his present colleague, Mr. B. O. Mulligan, in these investigations are reflected in the large increase in the number of enquiries relating to the subject.



In previous years enquiries relating to Disease Control Materials and Methods have been included under Entomology and Mycology, but the numbers received under this head have recently grown to such dimensions as to merit a special section in the report. The increase is due to the special investigations which have been in progress at the Long Ashton Station during the past few years relating to spray fluids, and especially to winter washes, and which have led to important practical developments during the past two or three seasons.

As a result of the work large numbers of enquiries have been received from spray fluid manufacturers and intending manufacturers of washes relating to the new types of washes, and from growers in connection with the special properties of the fluids and methods of using them. In this case also a very large proportion of the enquiries came from sources outside the Bristol Province, viz., 190 of a total of 224.

The feature of the advisory work for the year on willows was the successful introduction, by the Long Ashton Station, of a willow peeling machine to the willow-growing industry. A demonstration of the machine, which was attended by the chief willow growers of the country, was given in Somerset by the French makers.

The subjects covered by the Advisory work of the Department are Agriculture, Agricultural Chemistry, Agricultural Economics, Dairy Bacteriology, Cider and other Fruit Products, Pomology, Horticultural Chemistry, Economic Entomology, Economic Mycology, Disease Control Materials and Methods, and Willow Growing. The salient features of the work under each of these during the year are summarised below.

#### AGRICULTURE.

The work on grass land improvement mentioned in previous reports has been continued. The Chief Advisory Officer, who is responsible for this work in the Bristol Province, has again also taken an active part in grass land schemes in other parts of the country.

##### *Agricultural Chemistry.*

295 requests for advice were received and 807 samples were analysed in connection with these enquiries.

The main investigations in progress or completed during the year were as follows :—

(1) *Grass Land.*

- (a) *Longleat Grazing and Manuring Experiments.* The analysis of grass samples from the experimental plots at Longleat was continued. This experiment is being partially financed by the Bath and West Agricultural Society. Valuable field and laboratory data are being collected over a number of years.
- (b) *The Iodine Content of Pasture Grass.* This work is being conducted in collaboration with the Rowett Research Institute.
- (c) *The Eradication of Slender Foxtail ( Alopecurus agrestis ).* These experiments which were being carried out by the Advisory Chemist and the Agricultural Organiser for Wiltshire have now been completed, and the results published in the Journal of the Ministry of Agriculture, January 1930.
- (d) *Development Commission Pasture Experiments.* Two experiments in connection with the National Scheme of Experiments are under the control of the Advisory Chemist, and three-weekly samples of the herbage have been collected throughout the season for analysis.
- (e) *Nutritive Value of Pasture Grass.* Upwards of 700 samples of pasture grass and hay have been collected from different centres in the Province during the past four years. These samples are being subjected to complete analysis in order that their feeding value may be assessed.
- (f) *Eradication of Bracken.* These experiments, which have been carried out for the Experiments Committee of the Bath and West Agricultural Society, and which have been in progress since 1921, have now been completed. The final report appears in the Journal of the Bath and West Society for 1931.
- (g) *The Destruction of Moles.* The work has now been completed and a bulletin on the subject has been issued by the University. This bulletin is obtainable gratis on application.

**(2) Arable Land.**

- (a) *The Manuring of Flax.* At the request of the Ministry of Agriculture, the Advisory Chemist was asked to arrange for the establishment of Flax Manurial Trials. Accordingly, centres have been established in the counties of Somerset, Wiltshire and Dorset (in collaboration with the Reading Province).
- (b) *Mixed Corn Crop Trials.* A series of winter and spring sown mixed corn crop trials have been established in the Bristol Province. Representative samples of the thrashed material (which is to be used for home consumption) are being analysed at Bristol.
- (c) *Seeds Mixture and Clover Trials.* These are being continued.
- (d) *Mole Drainage Experiments.* These experiments are being conducted in order to trace the effect of mole drainage on soil texture.
- (e) *Sugar Beet Experiments.* Simple variety trials are being conducted.
- (f) *Liming Experiment.* One large scale trial has been established in the Province.

*Agricultural Economics.*

The advisory work in Agricultural Economics has increased considerably during the past year, so that, at the present time, over 200 farmers from all the counties of the Bristol Province are submitting their accounts for analysis and report. The work involved in preparing and examining these accounts has been made easier, both from the point of view of the farmer and the Economist, by the use of a farm account book, which has been issued by the Department. Nearly all the work in advisory economics has been in connection with ordinary farms, only about 2 per cent. of the enquiries being received from fruit growers and market gardeners. It is hoped to extend this side of the work if circumstances permit.

Investigations in progress may be summarised as follows:—

- (a) *Costing.* These investigations are in progress on nine farms comprising 2,148 acres.
- (b) *Financial Accounts.* 235 farms, comprising 93,708 acres are included in this work. The farms may be classified according to type. viz: 189 mixed, 30 milk producing, 13 cheese-making, 2 market gardening, and 1 fruit.

- (c) *Cost of Production of Sugar Beet.* This work, which was conducted in collaboration with the University of Oxford, has been concluded.
- (d) *Statistical Methods.* Work concerning the application of statistical methods to farm account data has been commenced with a view to establishing a possible method of farm classification.

#### DAIRY BACTERIOLOGY.

899 samples of milk were examined in the course of advisory work, and a total of 4,128 samples in connection with the whole of the activities of the Dairy Bacteriologist.

##### *Clean Milk Competitions.*

The Department has again co-operated with the counties concerned in the following Clean Milk Competitions :—

- (a) *Gloucestershire.* Three classes for competitors, of six months' duration, commencing January 1st, 1930.
- (b) *Somerset.* Competition confined to cheese-makers, of six months duration, commencing February 1st, 1930.
- (c) *Worcestershire.* Three classes for competitors, of six months' duration, commencing January 1st, 1930.
- (d) *Wiltshire.* No actual Clean Milk Competition, but the Register of Accredited Milk Producers, referred to in a previous report, was continued for the whole of the year and is still in progress.

The Dairy Bacteriologist has commenced an investigation into the practicability of using some form of insulated box for the transit of milk samples, particularly during hot weather.

A study is also being made of thermophilic organisms in milk.

#### CIDER AND OTHER FRUIT PRODUCTS.

401 enquiries, including 141 under the Cider Instruction Scheme in the counties of Dorset, Monmouth and Worcestershire, received attention.

Among the general enquiries, many received from fruit growers, related to the possibility of utilising culinary varieties for cider-making, in conjunction with low-acid sweet and bitter-sweet types of cider varieties.

The Instructor paid special attention to the following points in his counties.

*Bottling of Cider.* Further experiments were carried out with a view to examining local supplies of apples for making high grade bottled ciders.

*Filtering.* Demonstrations of filtering were continued on farms, since this process is of great importance in the production of high-grade ciders.

*Disorders of Cider.* Cases of cider disorders have been carefully investigated as they occurred, and methods of overcoming certain of them have been demonstrated.

*Orcharding.* Further records on the trial cider orchards were collected during the season.

#### POMOLOGY.

263 enquiries under this head were received, of which 140 were from districts outside of the Bristol Province.

The enquiries covered a very wide field, relating to almost every phase of fruit growing practice.

Special investigations were continued as follows :—

1. Pomological surveys in conjunction with soil survey work in the Evesham, Pershore and Cheltenham areas.
2. Sub-soiling investigations in connection with the bad effects of impervious subsoils on the growth of fruit trees.

#### HORTICULTURAL CHEMISTRY.

72 enquiries, including 36 from centres outside of the Bristol Province, were received.

Investigations were continued on the following points :—

1. Manuring of fruit trees, bush fruits and vegetable crops. The experiments on the two former had special reference to the use of potassic and nitrogenous manures. In the vegetable experiments the trials were in connection with asparagus "sickness." Potash deficiency appears to be an important factor in this problem in the Evesham area.
2. Survey of soils in the Fruit and Market Garden areas on the Lower Lias Formation around Evesham, Pershore and Cheltenham. Soil maps on a textural basis have been prepared for these areas.

### ECONOMIC ENTOMOLOGY.

The number of enquiries received during the year was 530, of which number 236, relating to work on tar-distillate washes and problems connected with strawberry growing, were received from outside the Province.

The main investigations carried out were as follows :—

*Winter Sprays.* Extensive field trials were again arranged, at five centres, with the aid of a special grant from the Ministry of Agriculture and Fisheries. A wash consisting of a mixture of high-boiling neutral tar-oil and heavy petroleum was included in the trials for comparison with the “two-solution” high neutral tar-oil wash. The former has proved itself to be exceptionally effective in the control of Capsid Bug on black currants. It also gives promise of controlling red spider in the egg stage. The tar oil-heavy paraffin wash also gives a high control of the other insect eggs controlled by the “high neutral” wash.

*Apple Sawfly.* Trials were made in the control of this pest by means of spraying at blossoming and a week after the petals had fallen. The sprays employed were nicotine and pyrethrum. Whilst some measure of control was obtained with later sprayings, it is felt that the correct time for spraying for this district has yet to be determined.

*Strawberry Problems.* Plots which have been laid down at Cheddar to demonstrate the work on strawberries carried out at Long Ashton, are proving satisfactory. The plots are run in collaboration with the Horticultural Instructor for Somerset.

*Use of Naphthalene on Carrots and Potatoes.* Further experiments with crude naphthalene and fractions of the oils contained therein have been carried out against Carrot Fly and Potato Eelworm. Results with the latter were not of a promising nature.

*Beet Carrion Beetle.* Results obtained in a small trial carried out in Gloucestershire show that lead arsenate dust effects an efficient control of this pest.

### ECONOMIC MYCOLOGY.

The number of advisory letters despatched during the year was

299, an increase of almost 90 per cent. on the previous season. The chief subjects of investigation were as follows :—

1. *Diseases of Fruit Trees.* Field control of apple mildew by means of dusts ; studies of apple die-back, associated with *Cytospora* *sp.* ; apple fruit rots, especially that caused by *Phytophthora Syringae* ; and the so-called "Allington Spot ;" *Botrytis cinerea* on cherries ; die-back of black currants, associated with *Diaporthe pernicioso* ; strawberry diseases generally, and the strawberry leaf-spot, and fruit-spot caused by *Septoria Fragariae*.
2. *Market Garden Crops.* Investigations relating to the more serious diseases occurring in the important market garden areas in the province were continued. The subjects receiving special attention were asparagus diseases, footrot of dwarf beans and peas, and vegetable marrow mildew.
3. *Ornamental Plants.* Work was carried out on a *Fusarium* bulb rot and wilt of early-flowering gladioli ; freesia diseases generally ; the control of *Fusarium* wilt of carnations and *Fusarium* wilt of China asters.
4. *Miscellaneous.* A further survey of hop diseases was carried out. Downy mildew was apparently absent from the Province during the year.

The *Melampsora* rusts of basket willows were fully investigated.

#### DISEASE CONTROL MATERIALS AND METHODS.

224 enquiries relating to these subjects, of which 190 came from outside of the Bristol Province, were received.

More than half of the enquiries were from manufacturers or intending manufacturers of winter washes of the tar-distillate type, and many others were from growers in connection with the use of this class of spray fluids.

Several enquiries related to the subject of Pyrethrum products and the use of pyrethrum washes as insecticides.

#### WILLOW GROWING.

198 enquiries were received regarding problems connected with willow growing, the chief being concerned with :—

The Control of Insect and Fungus attacks.  
Manurial Treatment of the Crop.  
Soil and Variety problems.  
Peeling of Willows.  
The Cultivation of the Cricket-bat Willow.

Field trials on the use of fungicides and insecticides were carried out on commercial willow beds in Somerset, from which useful information for future and more effective work was obtained.

Manurial experimental plots are being arranged for 1931.

Considerable interest has been shown by Somerset Growers in the growing of the Cricket-bat Willow, owing to the present high price of cricket bat timber. As many suitable sites for bat willows exist in the area, extensive planting may be expected.

The Somerset County Council willow trial beds have served a useful purpose in enabling growers to select varieties suitable for their requirements.

### *SPRAYING TRIALS AGAINST APPLE AND PEAR SCAB AT LONG ASHTON.*

#### *III. SEASON 1930.*

*By R. W. Marsh.*

The present paper is to be read in connection with the previous articles in this series, published by Mr. Maynard and the present writer, in the Long Ashton Annual Reports for 1928 (p. 112) and 1929 (p. 155). The continuation of spraying experiments and the highly successful control of scab obtained on the same plots for two years in succession led to the attempt in 1930 to establish the cumulative effect of scab control treatments. In order to determine this effect, certain varieties not highly susceptible to scab, on plots which had been practically clean in 1929, were either left unsprayed or given a light spraying programme. The scab-susceptible varieties were given two, or three, sprayings as in 1929.

Concerning spray damage, it was pointed out in 1929 that the variety Lane's Prince Albert could not safely be treated after blossoming with either sulphur-containing or copper-containing fungicides. It has been claimed in Nova Scotia that the damage caused to sulphur-sensitive varieties could be obviated by adding aluminium sulphate to the sulphur-containing spray. A trial of



this mixture was therefore carried out on trees of Lane's Prince Albert at Long Ashton ; this is described below.

Records of spray costs were made as in previous years on plots where the spraying was on a commercial scale. In addition, trials were made of the relative time taken to spray with guns and to spray with lances, other things being equal. Comparisons were also made of the cover obtained and the amount of damage resulting from these two systems of spraying.

A trial of Bordeaux mixture (one pre-blossom and one post-blossom spray) was made for the first time on the main block of pears in the Long Ashton plantations. In this block were representatives of 26 varieties of pear trees, giving the opportunity for making observations on spray damage as well as on scab control. A description of the pear plot follows : —

*Plot 11a (5/6 acre).*

This plot consists of bush pear trees planted as two-year-olds in autumn 1923. The trees stand 10 by 10 ft. in 34 rows each of 11 trees. The planning of this plot is irregular, the varieties principally represented being :—Beurre Hardy (99 trees), Conference (90), William's Bon Chretien (63), Fondante de Thirriot (44), and Josephine de Malines (44). Single specimens of some twenty-one other varieties are included in the plot.

#### SPRAYING PROGRAMME.

The apple plots used for spraying were Nos. 7b, 7c, 8a and 11 (described in 1928 and 1929 Reports). The complete scab control programme for 1930 is set out in Table I. Concerning this programme, it should be stated that plot 7c was required in addition for pyrethrum trials against red spider : it could not therefore be treated with any sulphur-containing spray fluid. Two varieties in this plot (Lane and Worcester) showed such excellent control of scab in 1929 that they were left unsprayed in 1930. On Newton and Grieve a considerable amount of scab had been present in 1929, and these varieties were therefore allotted two pre-blossom and one post-blossom sprays. On Grieve the post-blossom application was used as a test of spray damage, some trees being treated with guns and some with lances. The Allingtons, which had 91.8 per cent. clean fruit in 1929, were given one pre- and one post-blossom spray : the Cox's were given a pre-blossom spray only since they could not be used for spray damage experiments.

On plot 7b, the Lanes were left unsprayed to judge of the cumu-  
#\*

lative effect of the 1928<sup>\*</sup> and 1929 sprayings. The Worcesters received one pre-blossom and one post-blossom Bordeaux spray, comparing gun and lance application.

TABLE 1.  
SPRAYING PROGRAMME.

Plot.	Variety.			<i>Per cent. scab-free fruit in 1929.</i>	1930 Programme.	
					<i>Pre-blossom.</i>	<i>Post-blossom.</i>
7b	Worcester	..	99.9		Bordeaux 4-10-50	Bordeaux 2-5-50
	Lane	..	100		No spray.	
7c	Lane	..	100		No spray.	
	Worcester	..	99.6		ditto	
	Newton	..	83.7		Bordeaux 4-10-50 (twice)	Bordeaux 2-5-50
	Allington	..	91.8		Bordeaux 4-10-50	Bordeaux 2-5-50
	Grieve	..	56.2—99.8		Bordeaux 4-10-50 (twice)	Bordeaux 2-5-50
	Cox	..	88.8—94.2		Bordeaux 4-10-50	—
8a	Allington	..	99.9		Lime-sulphur 1-60	—
	Edward	..	100		ditto	—
11	Worcester	..	99.4		Sulphur dust	—
	Lane	..	99.5		ditto	
	Allington	..	99.4		ditto	
	Cox	..	91		ditto	
11a	Pear varieties	..	No crop		Bordeaux 4-10-50	Bordeaux 2-5-50

The Allingtons and Edwards on plot 8a were allotted a single spray with 1 in 60 lime-sulphur, to test whether this treatment would be sufficient to maintain the high level of control obtained in 1929.

Plot 11 (young apples, six years planted) was given a single pre-blossom dusting with sulphur. The programme for plot 11a (pears) is referred to earlier.

The control trees available in 1930 comprised the row of Lanes in plot 9 used in previous years. Part of this row was used for the experiment with aluminium sulphate, and will be dealt with under that heading.

The trees of Grieve left unsprayed in 1929 showed abundant scabbed wood in the spring of 1930: occasional scabbed twigs were also found in the control row of Lanes, but the remaining apple plots sprayed were free.

## PRE-BLOSSOM SPRAYS.

The first pre-blossom spray was applied on April 10th on the trees listed below :—

<i>Plot.</i>	<i>Variety.</i>	<i>Stage at time of Spraying.</i>
7c	Grieve .. ..	Nearly green flower
	Allington .. ..	ditto
	Newton .. ..	Burst
	Cox .. ..	Nearly green flower
11a	Pear varieties.. ..	Varying from burst to pre-flowering.

These plots were all sprayed as in 1929, using the power sprayer and moveable mains. Spray guns were employed throughout this series of applications except on Grieves.

The main pre-blossom application was carried out on April 28th and May 1st. The details are as follows :—

<i>Date.</i>	<i>Plot.</i>	<i>Variety.</i>	<i>Stage at time of Spraying.</i>
28.4.30	7b	Worcester .. ..	Nearly pink
28.4.30	7c	Grieve .. ..	Pink
		Allington .. ..	Nearly pink
		Newton .. ..	Green flower
1.5.30	8a	Allington .. ..	Nearly pink
		Edward .. ..	Nearly green flower

This application was carried out as before, using spray guns, except on Grieves and on half of the Worcesters. (Further reference to this point will be made later under the heading of costs of spraying.) Plot 11 was dusted, using a hand machine, on May 5th.

*Weather.*

The first week of April was wet and stormy ; the 10th was fair with a light N.E. wind. During the next fortnight rain fell on every day except two, and the temperature remained generally low. The last five days of the month were fine, with gradually increasing warmth, but there were northerly winds at over 20 m.p.h. on the 28th and 29th. The total rainfall for the month was 2.7 inches.

May opened with dry and sunny weather : the 5th was cloudy with 0.06 inches rain and a light northerly wind. Rain fell on every remaining day of the month except the 7th, 16th, 20th, 27th and 28th, but the falls were generally light. May 16th was sunny with a southerly wind at about 10 m.p.h. The total rainfall for the month was 1.45 inches.

### POST-BLOSSOM SPRAY.

The post-blossom spray was carried out on May 16th on the pears and June 2nd on the apples. The only varieties sprayed were Worcesters (in 7b), Grieves, Allingtons and Newtons (in 7c), and the pear varieties in 11a. On Worcesters and Grieves a further comparison of gun and lance applications was made: the remainder of the spraying was carried out with guns as before.

#### Weather.

There was a light fall of rain on June 1st, but the 2nd was fair with a very light S.E. wind. An inch and a half of rain fell on the 23rd and 24th, but the remainder of the month was predominantly fine and dry, the total rainfall for June being 1.98 inches.

### SPRAY DAMAGE.

The spray damage resulting from the post-blossom application was as follows :—

Plot.	Variety.	Spray Fluid Employed.	Damage.
7b	Worcester ..	Bordeaux 2-5-50 ..	Frequent russetting: occasional cracking
7c	Grieve ..	Bordeaux 2-5-50 ..	Widespread serious russetting and cracking

In both instances, the use of spray guns, as against the use of lances, did not appear to affect the amount of damage.

#### *Use of Aluminium Sulphate in Relation to Spray Damage.*

A small trial of a post-blossom application of a lime sulphur-aluminium sulphate mixture was made in the Long Ashton plantations on June 16th, using twenty trees of the sulphur-sensitive variety Lane's Prince Albert. These trees were about 12 years planted, 8-9ft. high and 12-15ft. spread. With three exceptions they formed a single row, so that the spraying treatments could be carried out without any danger of spray drift. The trees had not been sprayed in the spring and, by mid-June, scab was beginning to appear on the leaves.

The trial was arranged as follows :—

Series A	..	..	Nine trees left unsprayed.
Series B	..	..	Five trees sprayed with 1 in 60 lime-sulphur.
Series C	..	..	Six trees sprayed with 1 in 60 lime-sulphur <i>plus</i> aluminium sulphate.

The aluminium sulphate was added to the diluted spray fluid

at the recommended rate of  $3\frac{1}{2}$  lb. to every gallon of lime-sulphur concentrate. This addition approximately doubled the cost of the spray fluid.

The sprays were applied with a headland sprayer and gun, at a pressure of 90 lb. to the square inch. Approximately  $1\frac{3}{4}$  gallons of spray fluid were used per tree. Spraying was done by the writer, to ensure uniform application as far as possible.

At the time of spraying the trees bore an abundant crop, from 500 to 1,200 fruits per tree. In the latter part of June, however, there was a very heavy drop from all the trees, accentuated by sawfly damage. In July it was noted that the trees of series B (sprayed with lime-sulphur) showed leaf scorching and leaf drop, and had lost practically all their fruits. In series C there was no leaf scorching, but the drop was obviously heavier than in series A. Scab continued to develop slowly during the rest of the summer on the unsprayed trees, but was not noted on the remainder.

During August and September the crop was further reduced by gales and the final counts, made on October 6th, resulted as follows :

TABLE II.

FRUITS ON TREE 6.10.30.

Series.	Treatment.				Number of trees.	Average Fruits per Tree.		
						Scab-free.	Scabbed.	Total.
A	Unsprayed	..	..	..	9	57	56	113
B	Sprayed with lime-sulphur							
	1 in 60	..	..	..	5	14	2	16
C	Sprayed with lime-sulphur							
	plus aluminium sulphate	..			6	43	7	50

The quantity of fruit in Series B and C was too small for any deduction to be drawn concerning fungicidal effect : the indications are, however, that the addition of aluminium sulphate was not prejudicial to the fungicidal effect of the lime sulphur. Concerning spray damage, the above results show markedly the loss caused on Lane's Prince Albert by the use of lime-sulphur alone as a post-blossom spray. The addition of aluminium sulphate would appear to mitigate this loss, but the average number of fruits remaining on the trees in Series C is seen to be considerably less than half the average number on the unsprayed trees. As far as can be judged from this experiment it appears that the success attained with this mixture in Canada is not likely to be repeated here. This con-

clusion is corroborated by an experiment made by Martin at Wye (Wye. Coll. Journ. 1930, p. 182), in which he found that the addition of aluminium sulphate to a lime sulphur spray did not diminish sulphur damage to gooseberries.

#### YIELD OF CLEAN AND OF SCABBED FRUIT.

Mature conidia of the apple scab fungus were first found on April in a wood pustule on James Grieve. On May 12th, 20th and 26th, conidia were caught on vaselined slides exposed in the block of Grieve, but no ascospores were taken. Scab on the leaves was first noted on May 17th on an unsprayed pear tree. On the control trees of Lanes in plot 9, scab on the leaves was common by June, but only a few fruit infections took place in this month. During the wet weather of July and August, however, a large number of late infections on the fruit developed. On the trees of Lane in plot 7b, a little scab on the leaves and fruit was noted from June onwards. The Bramleys on this plot (unsprayed since 1928) also showed a few scabbed leaves.

It was noted that the scab pustules in the 1929 wood of Grieve remained active and continued to produce spores until September.

Counts were made principally in the late autumn while the fruit was passing over the grader. As previously, all fruits showing any scab whatsoever were counted as scabbed. The results are given in Table III.

TABLE III.  
YIELD OF CLEAN AND OF SCABBED FRUIT.

Plot.	Variety.	Spray Treatment.	Total Fruits.	Scabbed Fruits.	Per cent. Scabbed.	Notes.
7b	Worcester Lane	Bordeaux and Bordeaux .. — ..	13,081 .. 14,090 ..	7 658	0.05 4.7	Recorded 17.10.30 Scab-free in 1929
7c	Grieve Newton Allington Cox ..	Bordeaux three times .. ditto .. ditto .. Bordeaux once ..	4,688 .. 320 .. 3,460 .. 1,781 ..	0 0 0 0	— — — —	
8a	Allington Edward	Lime-sulphur once .. ditto ..	26,555 .. 2,730 ..	519 0	1.96 —	Recorded 21.11.30
11	Allington Worcester Cox ..	Sulphur dust .. ditto .. ditto ..	1,108 .. 504 .. 1,141 ..	0 0 0	— — —	
11a	Pear varieties	Bordeaux and Bordeaux ..	2,184 ..	32	1.5	
9	Lane	Control—No Spray ..	1,019 ..	505	49.5	52% scabbed in 1929

## COSTS OF SPRAYING.

The full costs of spraying are shown at the end of this paper for plots 8*a* and 11*a* only, since the remainder of the spraying was carried out on comparatively small blocks of trees. The trials of the relative time taken to spray with guns and with lances were made in plots 7*b* and 7*c*, and the results obtained were as follows :—

<i>Date.</i>	<i>Plot.</i>	<i>Variety.</i>	<i>No. of trees.</i>		<i>How sprayed.</i>	<i>Total time required.</i>
29.4.30	7 <i>b</i>	Worcester ..	..	48	Gun	64 mins.
do.	do.	do. ..	..	48	Lance	96 mins.
2.6.30	7 <i>b</i>	do. ..	..	48	Gun	54 mins.
do.	do.	do. ..	..	48	Lance	84 mins.
2.6.30	7 <i>c</i>	Grieve ..	..	10	Gun	20 mins.
do.	do.	do. ..	..	40	Lance	170 mins.

Each pair of results recorded above was obtained by working the guns and lances simultaneously off the power sprayer. It is seen that the time taken for spraying with lances is from one and a half to twice as great as that required to cover a comparable block of trees using guns.

## GENERAL REVIEW.

The season under discussion was more favourable to scab attacks than 1928 or 1929, so that examples of freedom from this disease in 1930 were not likely to be the result of weather conditions. Taking this into account, the indications of the cumulative effect of scab control measures at Long Ashton are very striking. For instance, the 96 trees of Lane's Prince Albert in plot 7*b*, although not sprayed in 1930, gave 95.3 per cent. of scab-free fruit. Again, the acre of Allingtons on plot 8*a* gave 98 per cent. of clean fruit following a single spraying with lime-sulphur at 1 in 60. It is believed that this high measure of control results from the fact that these trees were almost freed from scab in 1928 and were maintained completely free in 1929. In consequence, no opportunity was provided for wood infections during 1929, and the source of a spring outbreak of scab was therefore eliminated.

On the Newtons and Grieves of plot 7*c*, where scab attack had been allowed to develop in 1929, the application of two pre-blossom and one post-blossom sprays resulted in completely scab-free crops in 1930. On the pear varieties, one pre-blossom and one post-blossom application, using Bordeaux mixture, gave 98.5 per cent. clean fruit without causing injury.



The experiment on spray damage showed that the addition of aluminium sulphate to lime-sulphur for use on Lane's Prince Albert proved unsatisfactory. The fruit crop was lessened by the use of the mixture but not obviated. The only safe method of controlling scab on Lane's Prince Albert appears to be by carrying out all spraying before the blossoming stage. On Worcester Pearmain, russetting was noted following a post-blossom spray with half-strength Bordeaux, although this application had been made on the same trees in 1928 with practically no ill-effect. To ensure safety with Worcesters it therefore appears necessary to use 1 in 60 lime-sulphur for the post-blossom application. No spray damage due to Bordeaux mixture was noted on the pear varieties, but further trials on this point are required before definite recommendations can be made.

The figures for costs on plot 8a are little different from the comparable data for the same plot in 1929. On the pear plot, the combined cost of two sprayings on trees seven years planted amounts to about 1½d. per tree. The comparisons between spraying with lances and spraying with guns show that the former is a considerably slower process, and it was found, in addition, that

## COSTS OF SPRAY

Plot	No. of Trees	Dates	Spray Fluid	MATERIALS									
				Substance	Amt.	Cost	Sub-stance	Amt.	Cost	Water	Total Cost of Materials	Cost per Tree	Gall. per Tree
8a	338	1.5.30	Lime-Sulphur 1-60	Lime-Sulphur concentrate	15 gall.	22/6	—	—	—	900 gall.	22/6	½d.	2.7
*11a	374 pears	11.4.30	Bordeaux 4-10-50	Copper Sulphate	24 lb.	8/-	Lime	60 lb.	3/-	300 gall.	11/-	½d.	0.8
Do.	Do.	16.5.30	Bordeaux 2.5.50	Copper Sulphate	16 lb.	5/4	Lime	40 lb.	2/-	400 gall.	7/4	½d.	1.1

\* REMARKS.—Ground very soft on 11.4.30. Pipes all carried to plot by hand.

## SUMMARY OF

8a. £1 14 10  
 = 1½d. per tree.  
 = 17/5 per acre.

lance spraying gave a poor cover in windy weather. As there was no increase in spray damage following the use of guns, the saving in time obtained appears amply sufficient to justify their use in power spraying.

### SUMMARY.

1. The continuation of scab control experiments at Long Ashton for the third year in succession has afforded striking evidence of the cumulative effect of spraying against scab.

2. The addition of aluminium sulphate to a lime-sulphur spray does not obviate sulphur damage to the variety Lane's Prince Albert.

3. An example of Bordeaux injury to the fruit of Worcester Pearmain is recorded.

4. The use of spray guns with a power outfit effects a saving of time 33.50 per cent. when compared with the use of lances. Spraying with guns caused no increase in spray damage.

5. Excellent control of scab on pears was obtained by two sprayings with Bordeaux mixture—one before and one after flowering.

### APPLICATIONS.

LABOUR							TRANSPORT		Total Cost of Labour Mate- rials and Trans- port	Cost of Water- carting and Waste Time (Deduct)	Nett Cost	Cost per Tree
Man-Nozzle Hours	Attendant Hours	Hours Laying-out	Hours Waste Time	Horseman Hours	Total Man-Hours	Total Labour Cost at 10d. Hr.	Horse					
							Hrs.	Cost				
8½	5½	1	1	5½	21½	17/9	5½	5/6	£ s. d. 2 5 9	10/11	£ s. d. 1 14 10	1½d.
5½	2½	4	3½	6	21½	18/2	6	6/-	1 15 2	13/9	1 1 5	¾d.
4	3	1	1½	3	12½	10/5	3	3/-	1 0 9	6/0	14 0	½d.

### NETT COSTS.

11a. Pre £1 1 5  
Post 14 0

£1 15 5 = 1½d. per tree.  
£2 2 6 per acre.

## PROGRESS REPORT ON VEGETABLE DISEASES.

By Lawrence Ogilvie and B. O. Mulligan.

The following report deals briefly with progress made towards the elucidation and control of diseases of vegetables in the Bristol Province, with special reference to the Evesham and Cheltenham areas. With a view to furthering this work Mr. J. W. Ewan was appointed by the Ministry of Agriculture as assistant mycologist for vegetable diseases and took up his duties on January 1st. He resigned to take up the post of Ministry's inspector and was succeeded by the junior writer on April 14th.

The present report is a continuation of that published last year (9).

## ASPARAGUS DISEASES.

*Violet Root Rot of Asparagus.* (*Rhizoctonia Crocorum*, ? = *Helicobasidium purpureum*). Surveys of the Evesham asparagus area have revealed only two further very small centres of infection, both of considerable age. In view of the very slow spread of the disease the method of control at present adopted, namely, removal and thorough destruction by burning of all the affected roots, and planting the affected area with a non-susceptible crop, such as Brussels sprouts, appears to be satisfactory.

None of the other market garden crops in the vicinity of the diseased areas were affected, and of the common weeds of asparagus fields only *Rumex obtusifolius* was found to be attacked.

*Asparagus "Sickness."* As stated in last year's report there are strong indications that this condition is due to deficiency of potash. As work from the pathogenic point of view did not yield positive results, and as manurial trials carried out by other members of the staff now bear out this theory, detailed work on the trouble has been abandoned for the present.

*Other Asparagus Diseases.* There is no other important disease of asparagus in the Evesham area. *Zopfia rhizophila*, a fungus reported from asparagus on the Continent, was found in the Evesham area by G. C. Maltby in 1925. It was not again observed till the autumn of 1930, when it was discovered by us on some dead roots. It is not apparently associated with any definite disease symptoms. Experiments on its pathogenicity are to be carried out.

Lesions on asparagus stems bearing the fungus *Macrosporium commune* are not uncommon, but no positive results could be got by inoculation of pure cultures of this fungus on healthy stems.

### DISEASES OF DWARF (FRENCH) BEANS.

*Dry Root Rot.* In last year's report (9) dry root rot or foot rot of dwarf beans, caused by *Fusarium martii* var. *Phaseoli*, was described. This disease had not been hitherto recorded from Great Britain. To prove further the pathogenicity of the fungus, the following experiments were carried out.

On January 28th, 1930, surface sterilised seeds of the following varieties were sown in sterilised soil:—"Canadian Wonder," "Dwarf Negro Longpod," "Dwarf Sharpe's Goliath," "Early Prolific" and "Masterpiece." Two pots of each variety were sown, each containing six seeds, and on February 4th one pot of each was watered with a suspension of spores from a pure culture of *F. martii* var. *phaseoli*, isolated from plants from the Evesham area. The plants were grown in a warm greenhouse (60-65°F.) On April 2nd all the plants in the infected pots showed large red lesions on the stems. The fungus was re-isolated from these lesions.

On July 7th, 1930, surface sterilised seeds of the variety "Canadian Wonder" were sown in sterilised soil. The seeds had been soaked previously in water containing small pieces of mycelium. The plants were grown in a warm greenhouse, and on September 5th the following results were obtained:—

<i>Control.</i>		<i>Inoculated.</i>	
5	Healthy	4	Diseased out of 5.
5	do.	4	do.
4	Healthy, 1 failed to grow	4	do.
do.	do.	1	do.

The fungus was re-isolated from the above plants.

Through the courtesy of Mr. John Hall, Junr., of Bretforton, a variety trial was laid down in a badly affected piece of ground, with a view to determining whether any varieties were possibly resistant to the disease. In addition to common English varieties, some were obtained from Germany, but many of these proved unsuitable for market purposes on account of roughness, size, colour, or shape of pods. It was found that certain varieties which produced tough stems were more resistant to the disease than the

others. The varieties were divided into categories as indicated below :—

*Severely affected* :—"Canadian Wonder," "Early Prolific," "Masterpiece," "Flageolet Crimson," "Dwarf Ne Plus Ultra," "Ne Plus Ultra" (Foreign seed).

*Slightly affected, but unsuitable for market* :—"Dark Dun Forcing," "Broadsword," "Best of All," "Everbearing," "Princess," "Emperor William," "North Star," "White Elsenburg" or "Longsword," "Thuringia," "Dwarf Negro Longpod" (Foreign seed).

*Somewhat resistant* :—"Flageolet Victoria" ("Magnum Bonum"), "Saxony," "Incomparable," "Flageolet St. Andrew," "Dwarf Sharpe's Goliath" (Foreign seed).

Further variety trials are to be carried out next season. It should be noted that in the United States, where this disease is of considerable importance, no strikingly resistant varieties have been found and long rotations are recommended.

*Bacterial Disease.* A bacterial disease of dwarf beans (*Phaseolus vulgaris*) is becoming of increasing importance in the Evesham area, where it is commonly referred to by growers as "rust." It is apparently of fairly recent introduction. The most striking symptom of the disease, and one which is very noticeable in the field, is a sudden wilting of the whole or part of the plant. The leaves shrivel up and become brown, but remain attached to the plant. In the field large patches of plants may become so affected, the infection usually radiating from diseased plants. The wilting is due to invasion of the vascular system of the plant by bacteria.

On the leaves definite small angular water-soaked areas occur, surrounded by a light coloured halo, or there may be an abundance of small infections, giving the leaf a scorched appearance.

The longitudinal lesions which occur on the stem, at first green and water-soaked, but later reddish in colour are characteristic of the disease. From these lesions a milky white bacterial ooze is produced in the form of drops or tendrils.

Somewhat circular water-soaked lesions are produced on the pods. If infected at an early stage the pods become curled and twisted and reddish brown streaks may occur. A bacterial ooze may arise on the exterior or interior of the pods.

Seeds from infected pods exhibit much wrinkled maize-yellow spots on the seed-coat, underneath which copious bacteria may be found.

The disease was widespread in the bean plantings near Evesham and the varieties affected were, "Canadian Wonder," "Master-piece" and "Early Prolific." In some cases diseased plants had to be grubbed before they had podded.

The bacteria responsible have been isolated in pure culture and have reproduced the characteristic symptoms when inoculated on bean plants. Work is being done to establish their identity. The disease has been tentatively identified as "halo blight," described by Burkholder (3, 4). This disease, caused by *Bacterium (Phytomonas) Medicaginis* var. *phaseolicola*, is the most serious of the bacterial diseases of the bean occurring in New York State. According to Burkholder, no other bacterial disease of beans produces an ooze or exudate from the stem lesions, and the halo-like leaf spot caused by *B. (Phyt.) Medicaginis* var. *phaseolicola* is a symptom which can scarcely be mistaken or confused with other leaf spots. The cultural characters of the organisms, as far as they have been studied, also agree with this identification.

"Halo blight" has been recorded from Germany, where it is known as "grease-spot disease" (11), and was also observed in Switzerland by Burkholder, but there is no record of its occurrence in England. It should be noted, however, that the bacterial leaf blotch of dwarf beans, caused by *Bacterium Phaseoli*, E. F. Smith, has been recorded from England, the causal organism having been isolated successfully (6).

To demonstrate that the disease could be transmitted by growing plants in soil containing debris from infected beans, four pots containing sterilised soil were sown with seeds of the variety "Canadian Wonder," which had been previously surface sterilised. To two of the pots were added pieces of diseased stems and pods gathered from the field. The seeds in the control pots produced healthy plants, while one of the infected pots produced five heavily infected plants. The other infected pot produced healthy plants.

Of four similar pots sown on September 15th, 1930, four with infected pods added, and one control pot, the three infected pots produced 3, 5 and 2 infected plants out of 5 plants in every case, while the control pot produced healthy plants.

The methods of control advocated for this disease are:—

(1) The use, if possible, of bean varieties which show some resistance. Several somewhat resistant varieties are known in New York State, and trials of these and English varieties are to be carried out next season.

(2) The use of disease-free seed. There is no doubt that infected seed is the common mode of dissemination of the disease, and the attention of seedsmen should be drawn to its importance. It should be possible for growers to save disease-free seed from their own fields.

In cases where a small initial infection occurs in a field it might be possible to grub up the infected plants and so prevent further spread.

#### DISEASES OF BROAD BEANS.

*Chocolate Spot, etc.* An investigation of diseases of broad beans was carried out in conjunction with Dr. R. Woodward, of Oxford. It was found that several diseases of beans could be differentiated, some of which had apparently been confused in the past with "chocolate spot" (supposed to be caused by *Bacillus Lathyri*). A leaf spot due to *Cercospora Fabae* was very prevalent in Herefordshire from the end of February onwards. What was apparently true "chocolate spot" was common in Somerset in early spring. Control trials of both diseases were laid down in March, sulphur and copper-lime dusts being used, but it was found that by the beginning of May healthy and control plants had grown away satisfactorily from the disease, the top leaves being free from spots.

Several cases of leaf-spotting accompanied by discolouration of the bases of the stems were ascribed to frost damage.

*Ascochyta Fabae* was present in most of the fields, and both this and the other leaf spots were frequently followed by *Botrytis cinerea*, which often killed off the tips of the shoots.

#### DISEASES OF SUGAR BEETS.

*Heart Rot.* An investigation is being carried out on "heart rot" of sugar beets, in co-operation with Mr. A. W. Ling, Agricultural Adviser, Bristol University, to determine whether the disease can be produced by growing sugar beets in certain soils, either with or without the presence of *Phoma Betae*.

#### LEEK DISEASES.

*White Tip Disease.* This disease, first recorded by C. E. Foister, from the Edinburgh district in 1928 (5), was found in the Cheltenham area in 1929, where it is now causing considerable loss. Preserved specimens of leeks, supposedly attacked by bacterial soft rot, gathered in a market garden at St. George, Bristol, in 1928, have

also been found to contain the causative fungus. In the same market garden an acre of the variety "The Lyon" was heavily infected in 1930.

As indicated by Foister, the tips of the leaves die back, the affected area becoming white, while water-logged areas develop towards the middle or base of the leaf. It was found by us that infections often commence at the point where the leaf bends over, but a definite break is not necessary. If the base of the leaf becomes infected, the whole leaf-blade may wilt and the affected area become more water-soaked than usual. The disease may check the growth of the plants very severely, rendering them useless for market purposes.

Foister has shown that the associated fungus is a *Phytophthora*. Attempts have been made by him, by S. F. Ashby, of the Imperial Bureau of Mycology, and by ourselves to obtain the fungus in pure culture, but without success.

Measurements of spores as developed on the leaves are as follows :—

Oogonia.	Foister	.. .. .	27-39 $\mu$
	Ashby (Cheltenham material).		25-38 $\mu$
	O. & M. ( do. )		33-40 $\mu$
Oospores.	Foister	.. .. .	20-31 $\mu$
	Ashby (Cheltenham material).		20-32 $\mu$ (mean 27 $\mu$ )
	O. & M. ( do. )		27-40 $\mu$ (mean 36 $\mu$ )
Sporangia.	Foister	.. .. .	37-75 $\times$ 31-48 $\mu$ (mean 58 $\times$ 42 $\mu$ )
	Ashby (Cheltenham material).		37-70 $\times$ 29-49 $\mu$ (mean 51 $\times$ 38 $\mu$ )
	O. & M. ( do. )		43-76 $\times$ 29-43 $\mu$ (mean 58 $\times$ 38 $\mu$ )

The measurements made by Ashby were from mycelium developing from dry leek leaves which had been kept in the laboratory for several weeks. It was found by us that such leaves would produce a practically pure culture of the *Phytophthora* if soaked in water for three or four days. Ashby reports in our material both paragynous and amphigynous antheridia, about a quarter being of the latter type. The sporangia appear to be of the type with a shallow, broad, hyaline apical layer resembling those of *P. Siringae*.

Ashby notes the resemblance of the fungus to *P. Pini* Leonian. We have obtained cultures of this fungus, but our inoculations have not been successful. Neither does the leek *Phytophthora* agree with the diagnosis of *P. Allii* recorded on *Allium* in Japan.

The disease has appeared in the autumn of 1930 in the same spots as in 1929. Through the kindness of Mr. W. H. Hole, of Cheltenham, a trial of 17 varieties of leeks has been laid down on



infected ground, while part of this plot is being used for a fungicidal trial. The varieties "The Lyon" and "Musselburgh" are those usually grown and most severely affected in the field. Individual, apparently resistant plants have also been observed and these are being kept for seed.

*Bacterial Soft Rot of Leeks.* A bacterial soft rot (probably due to *B. carotovorus*) was found in the Evesham area, affecting the variety "The Lyon."

#### LETTUCE DISEASES.

*Ring Spot.* Usually known as "rust," this disease, caused by the fungus *Marssonina panattoniana*, is prevalent throughout the Province, and is found especially in market gardens where lettuce has been grown over a long period. Elongated sunken pale-brown spots appear on the under-surface of the midrib and these, accompanied by small brownish spots on the leaf blade, give the lettuce an unsightly appearance. Seedling plants may be so severely affected as to die off.

Variety trials are being carried out against this disease on infected soil. The variety "MacHattie's Giant" has not been found to be so resistant as is commonly supposed. In field practice it is usually found that later plantings are not so liable to infection. Rotation of the crop should be carried out in badly affected areas wherever possible.

*Bacterial Spot and Marginal Scorch.* A bacterial spot and marginal scorch is common throughout the area, and was prevalent on lettuces grown for experimental purposes in the Long Ashton greenhouses. This disease is being worked on, and is probably identical with the bacterial spot (caused by *Bacterium marginale*), described from the United States by Miss N. A. Brown(2) and recorded from this country by Paine(10). It is possible that a non-pathogenic marginal scorch may also occur.

*Pleospora Leaf Spot.* A leaf spot apparently undescribed previously was observed in April 1930 on the variety "Stanstead Park" in greenhouses near Taunton, and since then has been found on plants grown out of doors in Worcestershire, Gloucestershire and Somerset on the varieties "MacHattie's Giant," "Winter White" and "Lee's Immense." The first symptoms are small, light brown spots on the leaf blade, usually roughly circular, though sometimes angular or oblong. The spots may coalesce and involve a large area of the leaf, which becomes brown and shrivelled. The

centres of the spots on the outer leaves may fall out, producing a shot-hole effect. The spots have frequently a dark brown circumference or a number of concentric rings.

On the old spots *Macrosporium* spores are borne abundantly. The fungus grows readily on malt extract agar producing dark brown "sarcinula" *Macrosporium* spores measuring  $20-36 \times 16-25\mu$  (av.  $30 \times 19\mu$ ) and also, after some three weeks, perithecia of the genus *Pleospora*, with muriform ascospores with seven cross septa, measuring  $39 \times 18\mu$ . The perithecial stage is ascribed to *Pleospora herbarum* (Pers.) Rabenh., while the *Macrosporium* stage agrees with *M. sarcinula* Berk. emend. Bolle.

Lettuce plants have been artificially infected with the fungus by spraying the leaves with a spore suspension and the fungus has been re-isolated.

*Stem Rot.* This disease is prevalent in the market garden areas around Bristol. In several cases over 80% of the plants were affected. The symptoms are a rotting of the inside of the stem, accompanied by a pinkish and later a brownish colour. The affected area subsequently rots away entirely and the stem breaks off near the surface of the ground, the condition resembling cut-worm injury. A yellow bacterium was isolated by us and is being worked on. A yellow organism was isolated by Dr. S. G. Paine from material sent to him. The latter resembled very closely *B. vitians*, described by Miss N. A. Brown, as causing a similar lettuce disease in the United States (2).

? *Mosaic.* A condition much resembling mosaic was observed on plants sent us from Middlesex, on others of the variety "Peerless," raised from seed at Long Ashton, and on plants at Cheltenham. The leaves were very definitely mottled with irregular dark green and pale green areas, and the plants failed to heart.

Attempts were made to transmit this condition to healthy seedlings by rubbing diseased on healthy leaves and by transferring the aphid *Macrosiphum gei* from diseased to healthy plants, but without success.

It was thought not impossible that the symptoms might be due to deficiency of some essential chemical in the soil, and with this in view three applications were made of acid potassium phosphate ( $\frac{1}{4}$  oz. per gallon), potassium sulphate ( $\frac{1}{2}$  oz. per gallon) and ammonium sulphate ( $\frac{1}{2}$  oz. per gallon) at intervals of ten days, but these did not remove the symptoms, though in the case of the phosphatic solution some improvement was noticeable.

*Sclerotinia Disease.* A lettuce "drop" and soft rot due to *Sclerotinia Sclerotiorum* was observed in the Cheltenham area; control may be obtained by removing the diseased plants, together with the soil round their roots, and then watering the spot with a solution of formalin—1-50.

*Miscellaneous Lettuce Diseases.* A condition prevalent in the Cheltenham area, and apparently of much importance, is a very marked curling or puckering of the leaves accompanied by failure to heart. In cos varieties this is accompanied by considerable dwarfing. It was thought that the plants in question might be "rogues" and with this in view trials of the variety "MacHattie's Giant" from six sources were set out at the Institute. An average of about 2% of the curly plants in question appeared in the rows. This percentage is much less than the incidence of the condition in the field, where it appears to an extent of at least 10% in the variety "MacHattie's Giant."

#### DISEASES OF MINT.

*Mint Rust (Puccinia Menthae).* This rust is of much economic importance in the Cheltenham area, where mint is forced in greenhouses. The factors governing epidemics of the rust in greenhouses are not properly understood and control measures are being attempted from various angles.

#### DISEASES OF ONIONS.

*White Rot (Sclerotium cepivorum).* Trials are being carried out of various strains of the bunching onions, "White Welsh" and "White Lisbon," with a view to ascertaining their susceptibility to white rot.

#### PARSNIP DISEASES.

*Parsnip "Canker."* Parsnip "canker" causes severe losses to growers in the area. The trouble is being investigated as it is thought that several diseases may be implicated.

#### DISEASES OF PEAS.

*Foot Rot.* A foot rot of peas associated with a species of *Fusarium* and very prevalent in the Evesham area was referred to in last year's report. The symptoms of the disease are a dying off of the plants at the time of podding. The affected plants show dark brown to purplish streaks on the lower part of the stem, and particularly near its junction with the roots. The stem is some-

what constricted over the affected area and is easily broken at or below soil level. The disease tends to spread downwards into the roots, which develop the characteristic streaking and may finally rot off.

A *Fusarium* was isolated constantly from diseased plants in the area. With a view to proving its pathogenicity a number of greenhouse experiments were carried out.

1. On August 15th, 1929, two dozen surface sterilised seeds of the variety "Telegraph" were sown in steam-sterilised soil in pots infected with the fungus mycelium, while two dozen seeds were similarly sown in sterile soil. On September 15th, 1929, all the plants in the infected soil showed the characteristic lesions while those in the sterile soil remained clean.

2. On February 5th, 1930, seeds of twelve varieties were sown in pots in the same way. Two pots of each variety were sown, each pot containing four seeds. On February 6th one pot of each variety was watered with a suspension of spores from a culture of the *Fusarium*.

The plants were lifted on May 14th, 1930, and the following results were obtained:—

Variety.	Average Height of Controls.	Average Height of Diseased Plants.	Remarks on Diseased Plants.
Pilot (English seed) ..	35 inches	38 inches	Foot-rot slight.
Talisman (English) ..	32 "	25 "	Foot-rot severe.
Sharpe's Renown (English)	41 "	30 "	Slight Foot-rot.
Liberty (English) ..	32 "	29 "	Foot-rot severe.
Gradus Improved (English)	44 "	31 "	Foot-rot (one severe).
Meteor (Foreign) ..	16 "	19 "	Foot-rot.
President (English) ..	30 "	26 "	Very slight Foot-rot
Marvellous (English) ..	20 "	17 "	One severe, other three slight Foot-rot.
Eldorado (English) ..	12 "	13 "	Foot-rot.
Unique (English) ..	16 "	12 "	Foot-rot.
Queen (English) ..	24 "	27 "	Foot-rot.
Standard (English) ..	33 "	42 "	Foot-rot.

All the control plants remained free from the disease except one of the "Gradus Improved."

3. On July 8th, 1930, two pots of sterilised soil were sown with six seeds of the variety "Carter's Eight Weeks," which had been soaked in water in which pieces of the fungus mycelium had been teased up. One pot was used as control.

Three pots were sown similarly with the variety "Eclipse." The plants were then grown in a cool greenhouse. The plants were examined on August 14th with the following results:—

	<i>Carter's Eight Weeks.</i>	<i>Eclipse.</i>
Control . . . .	Six healthy plants. . . .	Six healthy plants.
1st infected pot . .	Five diseased plants (one not germinated).	Six diseased plants.
2nd infected pot . .	Five diseased plants (one not germinated).	Six diseased plants.

The variety "Carter's Eight Weeks" was very badly attacked, several plants beginning to die off at the base, whereas the variety "Eclipse" was still healthy in appearance above ground, though the stems were blackened at soil level.

Following is a description of the cultural characters and spore measurements of the fungus. The final characteristics were noted after the cultures had been kept for 40 days at 25°C.

On Potato Dextrose Agar. Mycelium whitish to sea-shell pink;\* substratum becoming vinaceous and finally chocolate to burnt umber.

On Oatmeal Agar. Extremely poor growth.

On Malt Extract Agar. Vigorous white mycelium with slightly brownish tinge becoming pale brownish drab to vinaceous drab; pseudopionnotes artemisia green to lily green.

On Sterile Potato Plugs. Mycelium at first white becoming pale brownish drab to vinaceous drab, chestnut when in contact with glass; pseudopionnotes dark greyish blue-green to Saccardo's slate.

On Steamed Rice. Mycelium pale vinaceous, with a blue colour in contact with the glass; medium becoming coloured dark mineral red to dark Indian red.

On Sterilised Clover Stem. Fair growth of greyish-white mycelium; abundant production of sporodochia.

\* Ridgway's "Colour Standards."

The average spore measurements in  $\mu$  on various media are as follows:—

SHOWING AVERAGE SPORE MEASUREMENTS IN  $\mu$  ON VARIOUS MEDIA.

		Age of Culture.				
		0—	1—	2—	3—	4-septate.
R. JONES.	bat agar ..	11.0 × 2.4	—	—	31.7 × 4.3	37.2 × 4.2
	% ..	1.0	1.0	10.0	85.0	3.0
	potato agar ..	7.0 × 2.3	20.4 × 3.5	30.6 × 4.0	32.0 × 4.2	—
	% ..	12.0	5.0	29.0	54.0	—
	potato dextrose agar ..	9.0 × 2.3	—	—	32.0 × 4.0	39.0 × 4.0
	% ..	5.0	.5	—	93.5	1.0
GILVIE & MULLIGAN.	salt extract agar ..	27.5 × 5.0	25.0 × 4.6	27.7 × 4.7	30.6 × 4.8	32.4 × 4.3*
	% ..	3.6	28.6	30.3	35.7	1.8
	potato dextrose agar ..	—	24.2 × 5.0	28.7 × 5.2	31.5 × 5.4	32.0 × 5.6*
	% ..	—	50.0	35.0	10.0	5.0
	potato plug ..	24.8 × 5.4	23.6 × 4.9	25.8 × 4.3	31.4 × 5.3	26.6 × 4.3*
	% ..	8.3	20.8	25.0	41.7	4.2
	potato plug ..	—	24.1 × 4.7	31.8 × 5.4	37.7 × 5.8	—
	% ..	—	6.7	20.0	73.3	—
	lice ..	—	28.3 × 5.0	29.3 × 5.1	39.7 × 5.9	47.2 × 6.8*
	% ..	—	18.4	34.2	44.8	2.6

Chlamydispores present on 44 days old cultures on potato dextrose agar and rice.

\* Only one spore seen and measured.

The above diagnosis agrees with *Fusarium martii* var. *Pisi*, described by F. R. Jones (7), as causing a stem and root rot of peas in the United States. The disease in question is distributed very thoroughly throughout most of the pea-growing area in the United States.

Through the co-operation of Mr. John Hall, Junr., of Bretforton, Worcester, a trial of 41 varieties of peas was laid down in March in a plot of infected soil. The following observations were made on July 15th, 1930 :—

*Severely infected* :—Thomas Laxton, Eclipse, Early Bird, Pioneer, Blue Bird, Freedom, Laxton's Superb, Primo, Laxtonian, Laxton's Progress, Meteor, Pilot, Eldorado, Unique, Marvellous, Hundred-fold, Talisman, Kelvedon Wonder, Bedfordshire Champion, Tip Top.

*Badly infected* :—Little Marvel, Pioneer, Early Giant Marrow-fat, Gradus, Admiral Beatty.

*Slightly infected* :—British Lion, World's Record, Gradus Improved.

*Apparently somewhat resistant* :—Lincoln, Alderman, Senator, Dwarf Defiance, Cheltonian, Duke of Albany, Witham Wonder, Standard, President, Liberty, Queen, The Gladstone, Royal Salute.

We are indebted to Messrs. W. W. Johnson, Boston; Messrs. Sharpe, Sleaford; Messrs. H. J. Speed, Evesham; and Messrs. Yates, Evesham, for seed samples. Similar trials are to be carried out next season.

According to Jones a comparatively high soil temperature, above 18°C., favours rapid development of the disease as it occurs in the United States, while soils containing much organic matter appear to favour the persistence of the fungus in the field. No evidence of dissemination of the fungus by seed was obtained by him, and he is of opinion that it is a widely distributed soil organism, having physiological varieties capable of varying degrees of pathogenicity.

It may be noted that an apparently identical *Fusarium* was isolated by us from the roots of wilted sweet pea plants, but no successful results were obtained by inoculation on sweet peas.

"Spot" Disease (*Ascochyta Pisi*). In May 1930 specimens of pea plants affected with "foot rot" were received from Worcestershire, with the report that two acres of plants had been so severely affected that they had to be ploughed in. The lesions on the

plants were typical of those caused by *Ascochyta Pisi*, being brown and sunken, and occurred mainly at or below ground level.

The fungus *Ascochyta Pisi* was isolated from this material and used in a series of pot experiments as follows:—Six surface-sterilised seeds of twelve varieties were sown in each of twelve pots in steam-sterilised soil. In Nos. 1 to 6 mycelium of the fungus was added, in Nos. 7 to 12 pieces of diseased root. The results were as follows:—

Variety.		Diseased. Healthy.		Notes.
1.	Blue Bird .. ..	2	4	—
2.	Progress .. ..	5	1	—
3.	Alderman .. ..	4	—	One failed to germinate. Two died when lin. in height.
4.	Telegraph .. ..	3	3	—
5.	Carter's Eight Weeks ..	3	3	Disease only slight.
6.	do. .. ..	4	2	do.
7.	Superb .. ..	5	—	—
8.	Eclipse .. ..	6	—	Severe only in one case.
9.	British Lion .. ..	5	—	One failed to germinate.
10.	Freedom .. ..	5	—	Do. Disease severe.
11.	Carter's Eight Weeks ..	3	3	Lesions at base of stem only.
12.	do. .. ..	6	—	do.

The symptoms of disease in most of these cases were the occurrence of brown sunken lesions at the bases of the stems, accompanied by sunken lesions higher up. There was not usually any leaf infection.

The above case is of much interest in so far as L. K. Jones in his studies of *Ascochyta Pisi* in the United States (8), has shown that there this fungus never causes the appearance of stem lesions extending below the surface of the ground.

The pod and leaf spot caused by *Ascochyta Pisi* was very prevalent in the Evesham and Cheltenham areas in 1930, rendering the crop in many cases almost unsaleable.

The disease may over-winter, according to L. K. Jones (8), either in old pea refuse or in or on the seed. Preliminary experiments with a view to at least partial control were carried out as follows, the number of seeds employed being few owing to difficulty in procuring infected seed.

Four pots of seed from infected plants were sown on October 20th. In two the seeds were treated with a proprietary mercury dust previous to sowing; the other two were untreated. Out of



seven seeds sown in each pot only one and two respectively germinated in the former, and seven and five in the latter. Apparently, therefore, the treatment is too severe.

Another experiment was carried out with hot water, as used by Jensen for sterilisation of barley seed infected with *Helminthosporium*, the seeds being subjected to water of a temperature of 52°C. for twelve minutes. Five seeds were sown in each pot. Germination was two, four and three seeds respectively and three in a control pot. Of all these only one plant in each of the second and third pots was unaffected. Further hot water treatments are to be carried out next season.

In a third experiment infected seeds were soaked in a 1 : 1000 solution of mercuric chloride for three minutes. Five seeds were sown in each of two pots of sterilised soil and two other pots were sown as controls. The results may be tabulated thus :—

Pot.	Germination.	Diseased Plants.	Healthy Plants.	
1	.. 5	.. 4	.. 1	} Treated.
2	.. 2	.. —	.. 2	
3	.. 4	.. 2	.. 2	} Untreated.
4	.. 1	.. —	.. —	

It is apparent that this method also fails to give successful control.

*Bacterial Disease of Peas.* The bacterial disease referred to in last year's report was not observed in 1930.

#### POTATO DISEASES.

*Potato "Sickness."* Potato "sickness," associated with the eelworm *Heterodera Schachtii*, and the fungus *Corticium (Rhizoctonia) Solani*, and frequently with the fungus *Colletotrichum atramentarium*, has become of serious importance to allotment holders in the neighbourhood of Bristol. On allotments at Ashton Gate, near Bristol, the disease has been present for about twelve years. The affected areas are very sharply defined.

A small experiment was carried out in the greenhouses at Long Ashton in 1929. Briefly, three series of pots were planted up in August with tubers of the variety "King Edward":—

1. Potato-sick soil.
2. Non-potato-sick soil.
3. do. with a culture of *C. Solani*  
from "sick" potatoes.

Under the abnormal greenhouse conditions series 2 and 3 grew very tall, 3 feet in height, but the leaves were dark green and of

normal appearance, although in series 3 the roots and the base of the stems were covered with *Rhizoctonia* mycelium.

Series 1 were less than half the height of the others, were markedly spindly and pale in colour, and the leaves were slightly rolled upwards, the petioles arising from the stem at an acute angle, symptoms identical with those occurring in the field. The roots of these plants were thickly covered with encysted females of the eelworm. Six weeks after planting little *Rhizoctonia* mycelium could be found on the roots, but a considerable amount was present five weeks later. *Colletotrichum atramentarium* was abundantly present on the roots of all the plants grown on the "sick" soil, but was absent from the roots of the other series.

That tomato plants can be affected with the disease is shown by the following. Five young tomato plants were potted up in Potato "sick" soil on May 4th, 1930, and on the same date five in potting soil from Long Ashton. When the plants were examined on June 19th, 1930, the average height of the plants in potato "sick" soil was 7 in., while that of the control plants was 20 in. The roots of all the plants in the potato "sick" soil were affected with eelworm, *Rhizoctonia* and *Colletotrichum*, while those of the check plants were clean.

It has hitherto been supposed that the eelworm and *Rhizoctonia Solani* are chiefly responsible for the disease, but in our opinion the role of the *Colletotrichum* possibly in conjunction with the other two, should be more fully investigated.

With the co-operation of the Hotwells and District Allotment Association several preliminary trials of the effect of chemicals on the disease were carried out on severely affected ground. The following materials were employed:—Sulphur (3 oz. per sq. yd.); cresylic acid, *i.e.*, mixed cresols (1/9th oz. per sq. yd., mixed with 1 stone of sand per plot of 18 sq. yds.); formalin (4½ gallons 1 in 50 formaldehyde soln. per sq. yd.); copper sulphate (2¼ oz. per sq. yd.); Cheshunt compound (4½ gallons per sq. yd.). The plots employed measured 7 by 3 yds., a strip of 3 sq. yds. in the centre being used as control.

The sulphur, cresylic acid and cresol plots gave no appreciable control as compared with the control strips. A marked control was, however, obtained with copper sulphate, and with formalin as will be seen from the following results:—

*Yield from Plot of 9 Square Yards.*

A. 1. Formalin ( $4\frac{1}{2}$ gallons 1:50 formaldehyde soln. per sq. yd. watered on) .. .. .	13.7 lb.
2. Formalin (do. but plot covered over for 2 days) .. .. .	14.4 lb.
3. Control plot. No treatment .. .. .	6.6 oz.
B. 1. Copper Sulphate ( $2\frac{1}{2}$ oz. per sq. yd. watered on) .. .. .	34.5 lb.
2. Cheshunt Compound soln. ( $4\frac{1}{2}$ gallons per sq. yd.) .. .. .	23 lb.
3. Control plot .. .. .	22 $\frac{1}{2}$ lb.

The plot B was apparently not so heavily affected as plot A.

In view of the possibility of certain potato varieties being resistant to "sickness" two variety trials were carried out. For both of these the "seed" was supplied free of charge by Messrs. Sutton & Sons.

The first trial was laid down in allotments near Bristol, through the kindness of the Hotwells and District Allotment Association, Ltd. "Arran Chief" planted on the plot during the previous year had been a total failure. Eighteen tubers of each of seven varieties were planted longitudinally and fourteen tubers each of two varieties were planted transversely. The tubers were planted on April 16th, and the early varieties dug on August 6th, the remainder on September 9th. The yield of each plant was weighed separately. The average yields per plant were as follows:—"King Edward," 22 oz.; "Arran Chief," 19 oz.; "Up-to-date," 16 oz.; "Edgecote Purple," 15 oz.; "Arran Victory," 14 oz.; "Stirling Castle," 12 oz.; "May Queen," 11 oz.; "Epicure," 11 oz.; "British Queen," 7 oz.

The second trial was laid down at Bristol Mental Institute, Fishponds, through the kindness of the Director and Mr. J. Merrick, head gardener. The crop last year on this piece of ground was a failure owing to potato sickness. The land is scheduled for wart disease, hence only immune varieties were planted. Seventeen varieties were planted transversely and two rows of one variety longitudinally. The tubers were planted on April 28th, the early varieties dug on September 3rd, and the remainder on October 2nd. The yield of each plant was weighed separately. The average yields per plant were as follows:—"Kerr's Pink," 18 oz.; "Perth Favourite," 18 oz.; "Arran Victory," 16 oz.; "Abundance," 16 oz.; "Inverness Favourite," 14 oz.; "White City," 14 oz.; "Ally," 13 oz.; "Arran Consul," 13 oz.; "Tinwald Perfection," 13 oz.; "Ben Cruachan," 12 oz.; "Great Scot," 12 oz.; "Majestic," 12 oz.; "King George," 12 oz.; "Edgecote Purple," 12 oz.; "Arran Comrade," 7 oz.; "Glasgow Favourite," 7 oz.; "Ben

Lomond," 6 oz. ; " Catriona," 6 oz. The yield of " Great Scot " in uninfected areas of the same field averages about 5 lb. per plant.

It was previously thought that purple varieties such as " Arran Victory " and " Edgecote Purple " showed some slight resistance to the disease. The above trials seem to indicate that none of the 27 varieties under trial can be confidently recommended for planting on " potato sick " ground.

*Potato Blight.* The following experiment was laid out under instructions from the Ministry of Agriculture's Plant Pathological Laboratories, the object being to ascertain whether, when potato blight makes its appearance, the younger plants are more resistant to infection. A plot of ground approximately 1 square perch in area was divided into eight equal squares, and on which twelve tubers of the variety " King Edward " were planted at intervals of about a fortnight. The whole was surrounded by a large area also planted on April 17th, 1930, with the variety " King Edward."

The following results were obtained :—

Plot	1.	Planted	April 28th.	On	Sept. 12th.	100% plants blighted (more than two leaves with all leaflets blighted).		
"	2.	"	May 15th	"		83%	"	"
"	3.	"	June 2nd	"		100%	"	"
"	4.	"	June 16th	"		92%	"	"
"	5.	"	July 1st	"		100%	"	"
"	6.	"	July 12th	"		42%	"	"
"	7.	"	July 23th	"		75%	"	"
"	8.	"	August 13th	"		0%	"	"

Blight was first observed on August 13th.

There seems to be no correlation between the age of the plant and the amount of infection except in the case of the very youngest plants.

A quantity of tubers of the supposedly resistant variety " Keay's Champion " was also received for trial. These were planted on April 28th. The plot had entirely dried up with blight by September 1st. On this date the surrounding " King Edward " was much the same although a few green tips still remained.

#### DISEASES OF VEGETABLE MARROW.

*Mosaic.* A mosaic disease of vegetable marrows was first observed in the Province in 1928. The symptoms of the disease are a very marked mottling of the leaves, taking the form of pale yellow markings which tend to run in wavy lines or circles. The

leaves also tend to become puckered. Affected shoots have decidedly shortened internodes and a tendency to branch. The affected fruits are mottled and covered with somewhat circular wart-like areas. All the young leaves and shoots of an infected plant ultimately show the symptoms, but the older leaves remain apparently normal. Much of the young fruit dries off without developing.

In 1928 and again this year *Aphis gossypii*, one of the chief vectors of cucurbit mosaic in the United States, and of cucumber mosaic in greenhouses in England, was found on marrows growing out-of-doors. Other insects prevalent on marrows were *Macrosiphum gei*, *Aphis rumicis* and a plant bug *Dicyphus errans* (identified by Dr. Harry Britten).

As there appeared to be some evidence of the spread of the disease in the field, various attempts were made to transmit it from diseased to healthy plants, under cages by rubbing and by means of *Aphis gossypii*, which was thought to be the most likely vector. Up to the present there appears to be some evidence that the disease is transmissible both by rubbing and by the aphid, as in the case of cucurbit mosaic in the United States, but transmission is by no means easy and further research is required.

The disease is apparently transmitted through the seed, as Bewley (1) has shown in the case of cucumber mosaic, and we have encountered several plantings in which a large percentage of young plants come up infected. Seeds kept from infected plants, however, have not yet given us infected plants.

Plants of white bryony (*Bryonia dioica*) growing in the neighbourhood of plantings of marrows have been found to have mottled leaves suggestive of mosaic infection, but our attempts to transmit marrow mosaic to white bryony seedlings by rubbing and by means of *Aphis gossypii* have been uniformly unsuccessful.

The disease is apparently becoming much more prevalent than formerly, and is attracting the attention of growers. Thus in one planting brought to our attention 35% bush marrows and 25% trailing plants were infected, and in another 100% bush and 89% trailing. In a third practically all the plants, 200 in number—both bush and trailing, were affected. Although 48 plants were grown under controlled conditions from the same batch of seed as the above, no mosaic plants were obtained.

*Mildew.* Vegetable marrow mildew (*Erysiphe Cichoracearum*) is of importance to growers as it causes the plants to wither off and

fruit production to cease a considerable time before natural dying off of the plants takes place.

With a view to ascertaining the effect of various sulphur dusts on the disease a trial was laid down at the farm of Mr. W. H. Hole, Swindon Road, Cheltenham. The plot in question consisted of six rows of marrows with approximately 35 plants in each row. On August 26th, 1930, applications of green sulphur, ground sulphur and a proprietary sulphur dust were made to three of the rows, the other three being left as controls. On that date mildew was just beginning to appear on the plants. The weather at the time was very warm and dry.

On October 10th, 1930, observations were made on the amount of disease on the plants, the amount of mildew on the leaves being divided into four categories—severe, slight, very slight and free. The results were as follows:—

Control row 1 .. ..	27 severe	6 slight	
Green sulphur .. ..	1 slight	8 very slight	29 free.
Control row 2 .. ..	20 severe	15 slight	2 very slight.
Ground sulphur .. ..	1 slight	6 very slight	27 free.
Control row 3 .. ..	30 severe	8 slight.	
Proprietary dust .. ..	1 severe	4 slight	1 very slight, 29 free.

In another trial applications of fungicides were interfered with by heavy rainstorms, but the following broad results were obtained. The applications were made on August 7th, 1930, and observations made on September 9th:—

1. *Green sulphur* .. .. Mildew present only on a few shoots or isolated patches of leaves.
2. *Ground sulphur* .. .. Similar to preceding.
3. *Copper lime dust* .. .. Mildew very severe.
4. *Proprietary sulphur dust* .. Row quite green, with many young shoots.
5. *Bordeaux mixture* (4-4-40) .. Badly affected. No appreciable difference from control rows.
6. *Burgundy mixture* (4-5-50) .. do.
7. *Ammonium polysulphide* (1-200) .. do.
8. *Lime-sulphur* (1-75) .. do.
9. *Colloidal sulphur* (1-320) .. do.

Seven control rows alternate with the above were very severely mildewed.

It is recommended that an application of sulphur dust be made as soon as the disease appears, preferably during warm and dry weather. Another application should be made several weeks later if the disease is seen to be spreading.

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NOTES ON SOME AGRICULTURAL AND HORTICULTURAL  
PESTS IN THE BRISTOL PROVINCE.

I.—THE BEET CARRION BEETLE (*BLITOPHAGA OPACA*)  
AND ITS CONTROL.

By L. N. Staniland and C. L. Walton.

This insect is not of very general occurrence, but now and again causes serious losses amongst young mangolds or sugar beet. A number of such cases have been brought to our notice recently. One, in particular, of which we were first informed by Mr. J. C. F. Fryer, M.A., of the Ministry of Agriculture, in 1929, has been of a particularly severe and persistent type, losses having recurred over a period of five or six years, whilst neighbouring crops have been affected from time to time.

*The Life History of the Beetle.*

The life history is usually given in textbooks as follows :—The adult insects hibernate in the soil, etc., become active in spring and lay their eggs. The resultant larvae feed for about three weeks on the leaves of the young mangold or beet plants and then pupate in the soil, hatching in due course. They are stated to feed also on weeds belonging to the *Chenopodiaceae*.

The natural habitat of these beetles appears to be the neighbourhood of woodlands.

Several similar species of beetle are frequently to be found on "carriion," such as small dead animals or birds, and may be confused with the present species which feeds on both carriion and plants.

Attention may be drawn to Figure 1, where the adult beetle and the active black larva are figured.

*The Lydney Outbreak.*

The outstanding case above mentioned was near Lydney, Glos., on the borders of the Forest of Dean. The field chiefly affected is situated at an elevation of 300ft., the soil being light loam over Old Red Sandstone ; it has a moderate slope, and is practically surrounded by woodlands. This field and a similar smaller one adjoining are the only plough land on the farm, and in consequence mangolds are grown on part of them every year, the rotation being one-third roots, one-third oats and one-third ley. It will therefore be seen that the sites of these crops of mangolds have been year after year in close proximity.

The land was in good condition and well suited to the crop, the few remaining plants being healthy and well grown. Heavy dressings of lime had been applied without having any deterrent effect. Carriion crows had been noted as feeding on the larvae.

At the time of the first visit (July 29th, 1929,) both adult beetles and larvae were present and fully 90% of the young plants on threequarters of an acre of mangolds had been destroyed, despite the fact that great numbers of the larvae had been hand picked and destroyed. Not only had the leaves of the plants been eaten but their stalks also. Other crops were not affected. An interesting feature was the presence of deep holes or galleries in the vicinity of the attacked plants, down which the larvae disappeared when alarmed.



In 1930 a series of experiments on the control of the pest was arranged. The worst affected part of the field was divided into four plots treated as follows :—

- Plot (1) *Arsenate of Lead dust*—applied three times, once just before attack was expected and twice thereafter.
- „ (2) *Arsenate of Lead dust*—applied after attack began.
- „ (3) *Whizzed Naphthalene*—broadcasted, both before and after attack.
- „ (4) Control plot.

The first larvae were noted on June 7th, and the plots were visited for detailed observation on the 11th. The following results were observed.

*Plot 1.* On the plot dusted with lead arsenate prior to the appearance of the larvae, no injury had taken place.

*Plot 2.* On the plot dusted after attacks had commenced, the plants were only slightly damaged.

*Plot 3.* Naphthalene had not prevented the plants from being injured.

*Plot 4.* The control plot was very severely attacked. It was noted that common spurrey growing as a weed on this plot had also been attacked to some extent. Part of this plot had been dusted with arsenate after severe injury had been done and dead larvae were noted during the visit.

It would appear from the above experiments that infestations of *B. opaca* can be either prevented or held in check by the application of arsenate of lead dust early in June.

For a possible alternative method of control the following reference is of interest :—

In the “Monthly Summary of Plant Pests and Diseases in England and Wales” for 18.8.30 (issued by the Ministry of Agriculture and Fisheries) this pest is recorded by Mr. H. W. Thompson, Advisory Entomologist for the South Wales Province, as being controlled during June as follows :—“The plants were rolled in the early morning and a dressing of soot given. Many of the larvae were killed and no further damage took place.”

Rolling, therefore, in the early stages (as recommended for Mangold Fly) would appear to be worth trial.



FIG. 1. --Beet Carrion Beetle (*Blitophaga Opaca*).

1. Adult Beetle ( $\times 2$  approx.)
2. Larva ( $\times 2$  approx.)
3. Damage by larvae to mangold leaf.



## II.—A CASE OF SAINFOIN MIDGE (*CONTARINIA ONOBRYCHIDIS*, KIEFF) IN WILTSHIRE.

By L. N. Staniland and C. L. Walton.

During the summer of 1929 some specimens of this pest were received from Wiltshire, whilst further examples were sent in during 1930, by Mr. W. T. Price, Agricultural Organiser for the County. A visit subsequently paid to the Warminster district on July 15th sufficed to show that the sainfoin which is extensively grown on the hill land thereabouts, was infested to a quite considerable extent.

In view of this, it is considered desirable to draw attention to this pest, which may become a serious menace to growers of sainfoin.

The insect, first described by Kieffer in 1895, belongs to the Cecidomyiidae or Gall Midges, many of which are of economic importance.

The first British record seems to have been in 1917, from the eastern counties (1). Barnes (2) refers to this and mentions the occurrence of the pest on the continent: after quoting Kieffer's description he states "The larval stage of this midge attacks the flowers of sainfoin (*Onobrychis sativa*). The flowers are swollen and remain closed. No seeds are formed. The larvae are gregarious and citron yellow or white in colour. Little, however, is really known concerning this pest."

### *The Pest in Wiltshire.*

How widespread this insect is in Wiltshire is as yet uncertain, but during the visit on July 15th it was detected over quite an extensive area where 10% of flowers heads were then found to be infested on one field, from 50 to 60% of the seed pods on such stems being thereby prevented from seeding. At the time of this visit many of the infested flowers had fallen, leaving bare areas on the seeding stems. The accompanying photographs, taken from specimens gathered on that date show (from left to right) (1) infested swollen flowers and (2) seeding heads showing gaps where infested flowers had fallen.

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- (1) Report on the Occurrence of Insect and Fungus Pests in England and Wales in the Year 1917, Bd. of Agric. & Fisheries, London, Misc. Publ. No. 21.  
(2) Barnes, H. F. "British Gall Midges of Economic Importance." Jnl. S. East. Agric. Coll., Wye, No. 24, July 1927, p. 97.

*Control.*

In a letter to the authors Dr. Barnes states "No control has yet been worked out for this pest and very little is known about it. The grubs stay in the flower heads for a short while in the summer, and then jump to the soil where they pupate. (If the crop is not grown for seed I should imagine the pest is not very serious.) If the crop is grown for seed all I can suggest is that as soon as the pest is seen to be present, the crop should be cut (perhaps used as fodder) and then allowed to flower again and this time the seed should be free from attack. This sort of control is used in America against a midge whose grubs eat red clover seed." Dr. Barnes adds, however, that it is not certain if there is a second brood.

### III.—NOTES ON A SERIOUS TOMATO PEST (*SCUTIGERELLA* *IMMACULATA*).

*By C. L. Walton.*

#### INTRODUCTION.

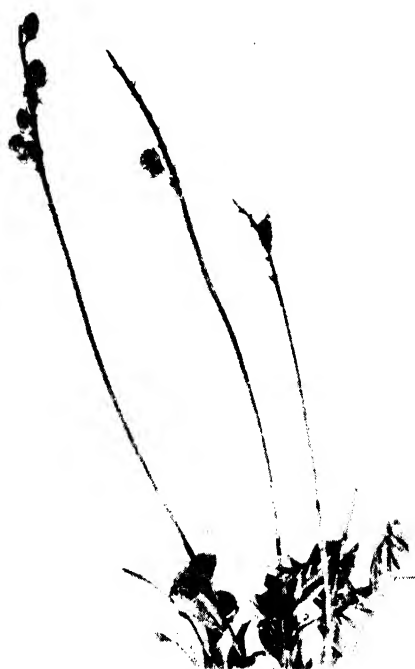
During 1928 the attention of the writer was drawn to the seriously stunted condition of tomato plants growing in a range of commercial glasshouses. Shortly after this another similar case was reported, and later a third was discovered. Three counties in the Bristol Province are concerned, namely, Somerset, Wilts, and Hereford. One case was of long standing, another less so, whilst the third had only become serious during the previous year. All the growers concerned were experienced and capable, and previously had been successful with their crops. These cases were of a most serious character, entailing the failure of the crop in entire houses and, being of an obscure nature, are evidently not always related to their real cause. Furthermore, from information received, it would seem that this trouble is by no means confined to the cases mentioned here, but occurs in other tomato growing areas.

#### THE CAUSE OF INJURY.

Investigations were set on foot, and soil from various depths was examined *in situ* and in the laboratory, whilst samples of affected plants were also obtained, together with all the information the growers were able to supply. It was obvious that the young plants commenced their growth in a perfectly healthy condition and speedily became unhealthy and stunted after being set out



1



2

Sainfoin plants showing injury by *C. onobrychidis*.

1. Affected flowers.

2. Loss of seed pods.



in the affected "borders." Examination showed that in such plants the root hairs had been eaten away in varying degrees; in the worst cases they had been wholly removed, and plants thus damaged in due time died away: the nature of the damage suggested the presence of some form of insect pest in the borders.

It was some time before the real delinquent was ascertained since a series of different creatures of close resemblance inhabited the soil of these houses. In one sample there were considerable numbers of immature Millepedes, undoubtedly harmful; in another, a fragile primitive wingless insect *Campodea lubbockii* was present, whilst sundry other small "Springtails" (Collembola) occurred in most samples. However by far the most abundant and widespread species was *Scutigerella immaculata*; individuals of this form literally swarmed about the roots of the plants in the affected borders during the growing season; they retire to subsoil levels during the winter season.

There seems no doubt that, although Millepedes and *Campodea* may be responsible for root injuries, the particular type of injury to which notice is here drawn—the wholesale destruction of root hairs—is due to *Scutigerella*.

*S. immaculata* is a very fragile creature which moves through the soil with great swiftness and is very difficult to handle or transport. It bears a strong superficial resemblance to both *Campodea* and to immature "Millepedes" with both of which it is undoubtedly confused by many observers. It belongs to a little known group, the "Symphyla," recently dealt with by Dr. Brade-Birks (1), who describes them as "A class of soil-dwelling Arthropoda, it forms with Diplopoda (Millepedes q.v.) and Pauropoda (q.v.) the Super-class Progoneata. Symphyla comprise but one family, the Scolopendrellidae. The white body, never more than eight mm. long, is invested with thin chitin and consists of a distinct head with one pair of many jointed antennae and an elongated trunk bearing 12 pairs of legs, of which the first is often reduced. At the hind end of the body are a pair of backwardly directed conical appendages, the cerci, which function as spinning organs.

"Symphyla have been described from all the continents of the

(1) Rev. S. Graham Brade-Birks, D.Sc. "Encyclopaedia Britannica." 14th Edn., Vol. 21. 1929, p. 705.



globe. They are occasionally injurious to the delicate tissues of cultivated plants" (1).

Brade-Birks in another recent article (2) deals with the "Economic Status of Symphyla," and quotes a series of observations on various cases of plant damage, several of which refer specifically to *S. immaculata* in America and France. After quoting Theobald (1912), who mentions the occurrence of a Symphyle in Guernsey associated with "considerable damage . . . done in the glass-houses . . . to tomatoes, etc.," he sums up ". . . it would appear that attacks of Symphyles are rare on this side of the Atlantic and from anatomical evidence we should expect none but very soft tissues, or parts of plant cells otherwise exposed, to be attacked."

Attempts to breed these creatures in the laboratory and to get them to cause injury to tomato seedlings failed, it being evidently impossible under the conditions used to obtain the right degrees of moisture, temperature, darkness, etc., necessary for them.\*

#### CONTROL MEASURES.

So far, these have been limited to attempts made by some of the growers themselves, but have nevertheless included some vigorous, ingenious and sustained efforts in that direction. The author has made certain suggestions and these are under trial. One grower soon discovered that if he removed stunted plants to pots free from the pest, root-hairs were soon formed and growth recommenced; these plants transplanted again to infested borders speedily reverted to their former condition. Plants potted out with their roots and soil enclosed in grease paper bags continued to grow until the paper decayed and a wholesale use of containers (and even newspapers) was resorted to and enabled the plants to gain size (and hence greater resistance) before becoming subject to attack.

It has also been found that soil treatment, in order to be of value, must precede the crop, and that during such time the mass of the Symphyles are situated at depths down to three feet (depending

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(1) C. Attems in Handbuck der Zoologie IV, p. 11 (1926). See also Revue de Zoologie Agricole, Bordeaux, Sept., p. 192, 1925.

(2) Brade-Birks' "Notes on Myriapoda XXXIII." "The Economic Status of Diplopoda and Chilopoda and their Allies." Journ. S. East. Agric. College, Wye, No. 26, July 1929, p. 188.

\* I am indebted to Dr. Brade-Birks for examining specimens from the affected glasshouses in this province.

upon temperature and the depth at which a "subsoil" is reached). The worst injury usually occurs in "patches," which vary in size and site from time to time. Deep trenching to expose the subsoil, which is then dressed with soot, or other substances, has given good results, but is very expensive: in one case an overdose of soot led to unsuitable growth in the crop. This method is being further experimented with, using calcium cyanide, naphthalene and other substances as soil fumigants.

#### SUMMARY.

Several cases of a characteristic form of tomato plant failure in the Bristol Province have been investigated.

*Scutigerella immaculata*, a fragile, soil-dwelling member of the Symphyla, appears to be the causal organism associated with the trouble, feeding upon the root hairs of the plants and thus inhibiting their growth.

The habits of this pest render its control a matter of difficulty, but it is hoped to be able to devise some means which will render this less expensive and laborious.

#### A NOTE ON THE CONTROL OF WOOLLY APHIS ON DORMANT NURSERY STOCK

By L. N. Staniland and C. L. Walton.

At the suggestion of the Ministry of Agriculture, arrangements were made during the winter of 1928-29 to test various methods of treatment of young dormant fruit trees, after removal from their nursery quarters, for the destruction of adherent insect pests.

A batch of young apple trees heavily infested with Woolly Aphis (*Eriosoma lanigera*) was secured and treated as described below.

The results obtained were not reported in the last Annual Report, since it was hoped to amplify the work and include experiments with other pests also. So much difficulty in securing suitable further material has been experienced that it has been decided to publish without further delay such results as have been obtained already.

The material available for the 1928-29 experiments consisted of 48 bush and 48 standard apples. These were divided into six lots of sixteen trees each, eight bush and eight standards in each

lot. Each lot of sixteen was subjected to a different treatment. A record of the treatments, with the results in each case, is given in the appended Table.

As regards individual treatments, dipping consisted in immersing in a tank containing the wash the entire trees, roots included, for a sufficiently long period to ensure thorough wetting.

Trees treated by spraying were placed against a wall and the spray applied by means of a bucket pump until they were thoroughly wetted; the trees were then reversed and the process repeated.

After treatment all trees were allowed to drain and dry previous to planting.

In the case of the fumigated trees, fumigation was carried out in a gas-proof chamber.

Subsequent to the treatments the trees were planted together on a plot of cultivated land and kept under observation until early June in the following year.

After periodical preliminary observations on the effects of the treatments, final examination of the condition of the trees was made on June 7th, 1929.

#### TREATMENTS AND RESULTS.

Treatment (26.11.28).	No. of Trees.	Results of Observations (7.6.29).		
		Trees Infested with Woolly Aphis.	Trees free from Woolly Aphis.	Trees Dead.
Hydrocyanic Acid Gas. (1 oz. sodium cyanide per 100 cu. ft. for 1 hour ..	16	13	2	1
10% Tar Oil Wash* (Dipped) ..	16	—	16	—
10% Tar Oil Wash (Sprayed) ..	16	—	16	—
Nicotine and Soft Soap Spray (8 oz. per 100 gallons). (Dipped) ..	16	6	10	—
Nicotine and Soft Soap Spray (Sprayed)	16	6	10	—
Controls .. .. .	16	10	6	—

\* The tar oil wash was one of the old type in common use prior to the introduction of the more modern neutral high-boiling type.

It would appear from this small experiment that infestations of Woolly Aphis on young apple trees may be eradicated by immersion for a few minutes in a 10% solution of Tar Oil wash or by spraying thoroughly with the same material. The 32 infested trees so treated all remained free up till 7th of June in the following summer. This method would seem to offer an easy and inexpensive method of cleansing infested nursery stocks, without injury to the trees themselves.

Fumigation with hydrocyanic acid gas proved almost a complete failure, whilst treatment with a nicotine and soft soap solution was only partially successful.

#### *CIDER MAKING TRIALS FOR THE SEASON 1929-30.*

*By O. Grove.*

As last year the cider apple crop was good in nearly all districts, and the juices were characterised by exceptionally high sugar contents. The average specific gravity of the juices from all the samples examined at the Institute was 1.0575, which is considerably above the normal. The high sugar contents were undoubtedly due to the favourable weather during the summer and autumn of 1929. It was also a good year for perry pears.

#### *THE CIDER AND PERRY COMPETITION.*

For the fifth year in succession a competition on similar lines to those described in earlier reports was arranged.

148 entries of fruit were received ; of these 113 were apples and 35 pears. The fruit was stored until judged to be fit for milling, and the subsequent treatment given to each cider or perry was the same except for the following differences as to the filtration period. In Class I the ciders were filtered when the specific gravity of the fermenting juice was 1.028 ; in Classes II and VI, 1.030 ; in Class III, 1.020 ; and in Classes IV and V, 1.025.

Details of entries will be found in Table I below.

The competition was open to growers residing in the counties of Devon, Dorset, Gloucester, Hereford, Monmouth, Somerset and Worcester. The entries from the different counties were distributed as follows :—Devon 10, Dorset 3, Gloucester 41, Hereford 19, Monmouth 27, Somerset 40, and Worcester 8.

The ciders and perries were judged on April 15th and 16th, 1930, by Messrs. G. A. Martin, Bristol; Wm. D. McCreath, North Petherton, Somerset; and John H. Wootton, Byford, Hereford.

Class I, Kingston Black, was a very good class. As it will be seen in the Table below, the specific gravities of the juices were exceptionally high, reaching as much as 1.081 in one case. At the same time the acidity of the juices was considerably above normal for this variety, and the ciders were consequently more acid in flavour than usual. The tannin character was also well marked, and the ciders had plenty of "body."

Class II, sharp varieties, was for the first time divided into two groups: (a) with an acidity of the juices of 0.80% or above, (b) with an acidity below 0.80%. Group (a) comprised ciders which can only be used for blending with ciders of lower acidity, whereas the ciders in group (b) can be used unblended. This division of the sharp class was adopted as a result of the experience of previous years of the difficulty of satisfactory comparison of ciders of widely different acidities and has been found very helpful by the judges.

In group (a) (14 entries), the two samples of Cap of Liberty from Martock were excellent ciders. The Fredericks were next in merit, and Cowarne Red was a very good sharp cider with an unusually high acidity for the variety. The rest of the samples in this group were not up to the standard of the varieties named, although they were quite good ciders for blending purposes. Honey Hall Red and Sour Hangdown were tried for the first time; the first-named showed an undesirably high rate of fermentation.

In group (b) (12 entries) the two well-known varieties Red Streak and Dymock Red produced ciders of high quality, and the same was the case with Ansell. The fruit of this last variety ripens unusually late and keeps sound for many months. Mullin's White, Wallis and No. 34, Stoke Red, gave very useful ciders. The last-named was perhaps not so good as it has been in some seasons. The other Stoke Red, No. 33, showed an exceptionally low tannin content, which made the cider somewhat insipid in flavour. Both the samples of Golden Ball produced fairly useful ciders, but the juices fermented too quickly. The rest of the entries in the group were of quite fair standard.

Class III, sweet varieties (15 entries), was upon the whole not of great merit. The Sweet Alfords were not quite so good as usual for this excellent variety. Of the four Perthyres entered, No. 44

was the best, a cider of nice flavour, very useful for blending with sharper varieties. No. 52, Woodbine, was a good cider, and so was No. 46, Honeystring, which was tried for the first time. No. 49, Pound Apple, gave a sweet cider of good quality. No. 39, Morgan Sweet, a variety which as a rule produces a rather inferior cider, was this year quite acceptable. Eggleton Styre, Wyatts Seedling and Berkeley Pippin, all gave very fair ciders, the last-named being considered the best of the three.

Class IV, bittersweet varieties (27 entries). This was the best class of the season. As will be seen from the table, the tannin percentages in the ciders were fairly high and the bittersweet character consequently well marked. With the exception of Sandford Jersey, Councillor, Broadnose Jersey, Hatcher and Wyatts Sweet, all the varieties entered in the class have appeared in these competitions previously. Sandford Jersey gave a cider with a very high tannin content, a typically bittersweet cider with a fairly good flavour, useful for blending purposes. Councillor produced a cider of similar character, a little more coarse in flavour. Broadnose Jersey—which appears to be identical with Strawberry Norman—and Wyatts Sweet gave bittersweet ciders of fair quality, and Hatcher a good cider with a pleasant flavour. As will be seen from the prize list, the well-known varieties Cherry Norman, Royal Wilding and Knotted Kernel were well to the front; very good samples of these excellent bittersweet varieties. Nos. 54, 55, 56 and 57 were all very fair, White Norman being the best of the four. No. 58, Broadleaf Jersey, was rather coarse in character; the juice fermented very rapidly and the cider did not keep very well in bottle. The other varieties entered gave ciders which in most cases were above their usual standard. This was especially marked in the case of No. 75, French, which is not considered of much value as a cider apple.

In Class V, mixed varieties (33 entries), it is interesting to note that the first and the third prize were awarded to ciders made from blends of apples grown in trial orchards established with trees supplied by the Institute. It is also worth noting that the four samples placed first by the judges all contained a proportion of the Kingston Black apple. The chemical analysis of the juices shows that most of the blends were well balanced with regard to acid and tannin contents, which indicates that the apples were blended in suitable proportions of sharp, sweet and bittersweet varieties. A few, such as Nos. 101 and 102, were too high in acid and the tannin content was a little too high in a few others, but

upon the whole the blending was good, better than has been the case in former competitions. It will also be noted that the six samples selected for awards had an acidity below 0.50%.

All the ciders in the competition were kept in bottles for about a year. With very few exceptions they kept very well. There were no cases of cider sickness or ropiness and only small yeast deposits were formed in the bottles.

Class VI for perry (35 entries) was a very good class. The first prize, No. 114, Moorcroft, was an exceptionally good perry with a nice fruity flavour. Otherwise the Oldfield pear carried most of the honours, being awarded the 2nd, 3rd and 4th prizes. The Blakeney Reds followed in merit, but the perries made from the Butt pear suffered from excessive astringency. None of the other varieties named in the list produced perries of special merit.

Besides the analyses of the competition ciders and perries, Table I below gives the corresponding data of some ciders made from apples grown in the trial orchard at the Institute, and, of ciders made from blends of Bramley's Seedling and Dabinett. Of these last-named the most palatable cider was that obtained from a blend of equal parts of Bramley's Seedling and Dabinett.

#### REPORT OF JUDGES

##### ON THE LONG ASHTON CIDER COMPETITIONS 1929-30.

The judging of the ciders in these competitions took place on Tuesday, April 15th, and Wednesday, April 16th.

In Class I, for Kingston Black apples only, there were 12 entries. The ciders were remarkably uniform and all were of good quality. Although hardly up to the best standard of this variety on account of the unusually high acidity and rather pronounced bitterness, they confirmed the view that the Kingston Black is the best of the English cider varieties for use unblended. The colour was rather paler than usual.

Class II, for "Sharp" varieties, has this year been divided into two sections, *A* for very acid sorts suitable only for blending, and *B* for medium acid kinds suitable for use unblended. This division has proved very satisfactory, and the awards have been more straightforward to make.

In the *A* group (14 entries) the prize-winners were sorts of long-recognised value and well earned their position. As a whole this group constituted a good class.

In the *B* group (12 entries) almost every cider was palatable. The results generally were very satisfactory, and all the ciders gaining awards proved to be good enough for use without blending.

Class III, for "sweet" varieties (15 entries), proved to be the most variable and disappointing class of the year. None of the prize-winners reached the best standards of some other years, although all were acceptable. Many of the entries showed a distinct trace of a bitter flavour in spite of the small amount of tannin recorded by the analyses of the juices.

Class IV, the "bittersweet" class, with 27 entries, was the best class of the year. The 1st and 2nd prize-winners were outstanding in merit and the general average of the class was fairly high.

Class V, for blends of apples, showed a great improvement on other years, so far as the general standard of the blending was concerned. The competitors seem now to have a better idea of the principle of blending. There were 33 entries, and the chief criticism to make of the class as a whole is that in most cases the blends contain no distinctive character. The first three prize-winners were, however, examples of really good blends.

The class for perry (Class VI, 35 entries) just failed to reach last year's abnormally high standard. It was, however, a very good class and much above that of an average year. The first prize perry was regarded as outstanding.

As a whole the colour of the ciders this year is deficient and the body and general fruity character are not so marked as anticipated from the high gravities of the juices and the hot dry summer of 1929.

In conclusion, the cider house staff are to be warmly congratulated on the excellent condition in which the ciders were presented, and in every case the samples had a fair chance of an award so far as care and attention to their making could give it them.

Signed W. D. McCREATH.  
JOHN H. WOOTTON.  
G. A. MARTIN.



TABLE I.  
COMPETITION VARIETIES.

No.	Name of Variety.	Date of making.	Specific Gravity of Fresh Juice.	Malic Acid per cent.	Tannin per cent. fermentation.	Rate of Filtering.	Date of Filtering.	Specific Gravity at time of Filtering.	Specific Gravity May, 1930.	Name and Address of Grower.
CLASS 1.—KINGSTON BLACKS—										
1	Kingston Black	18/11/29	1.061	0.65	0.20	4.2	31/1/30	1.028	1.026	E. V. V. Wheeler, Tenbury, Wor.
2	"	18/11/29	1.067	0.72	0.23	4.2	5/3/30	1.028	1.028	H. E. Dabinett, Somerton, Som.
3	"	18/11/29	1.075	0.76	0.20	4.0	7/4/30	1.028	1.028	E. E. Kingston, Somerton, Som.
4	"	18/11/29	1.080	0.89	0.24	4.8	2/4/30	1.028	1.028	W. Wyatt, Kingweston, Som.
5	"	18/11/29	1.078	0.89	0.24	6.2	11/2/30	1.028	1.027	J. Maunder, Kingweston, Som.
6	"	19/11/29	1.081	0.86	0.25	5.5	10/4/30	1.028	1.028	H. Knight, Huntley, Glos.
7	"	19/11/29	1.070	0.80	0.22	3.0	10/4/30	1.028	1.028	H. C. Davis, Hewish, Som.
8	"	19/11/29	1.072	0.79	0.24	4.2	7/4/30	1.028	1.028	P. E. Bomford, Upton Snodsbury, Wor.
9	"	19/11/29	1.065	0.67	0.21	2.8	19/3/30	1.028	1.028	R. J. Denning, Ilminster, Som.
10	"	19/11/29	1.061	0.69	0.21	3.2	7/3/30	1.028	1.028	W. H. Hunt, Easton-in-Gordano, Som.
11	"	19/11/29	1.065	0.71	0.20	3.5	31/3/30	1.028	1.028	R. J. Wear, Congresbury, Som.
12	"	21/11/29	1.056	0.70	0.19	3.4	12/3/30	1.028	1.028	W. R. Thomas, Nunnington, Her.
CLASS 2.—A. SHARP VARIETIES. Acidity 0.8 per cent. or above—										
13	Wagstaff	24/10/29	1.068	1.10	0.17	4.8	6/1/30	1.030	1.029	P. E. Bomford, Upton Snodsbury, Wor.
14	Farmers Glory	29/10/29	1.051	0.97	0.22	4.0	20/12/29	1.030	1.029	H. C. Davis, Hewish, Som.
15	Frederick	4/11/29	1.049	1.03	0.10	3.0	8/1/30	1.030	1.029	W. Beer, Abergavenny, Mon.
16	Frederick	4/11/29	1.051	1.04	0.09	3.8	6/1/30	1.030	1.028	A. Williams, Abergavenny, Mon.
17	Frederick	4/11/29	1.049	1.08	0.08	3.1	14/12/29	1.030	1.029	A. L. Thomas, Mansons, Mon.
18	Frederick	4/11/29	1.060	1.10	0.13	3.8	4/1/30	1.030	1.029	J. Mullins, Dingestow, Mon.
19	Cowarne Red	13/11/29	1.056	0.92	0.13	4.2	10/1/30	1.030	1.028	W. P. Merrett, Arlingham, Glos.
20	Styre	15/11/29	1.059	0.96	0.22	3.7	24/1/30	1.030	1.030	W. Houldley, Newent, Glos.
21	Cap of Liberty	20/11/29	1.063	1.10	0.27	3.0	28/3/30	1.030	1.030	E. Hodges, Martock, Som.
22	Cap of Liberty	20/11/29	1.063	0.94	0.30	3.8	18/3/30	1.030	1.030	W. Maynard, Martock, Som.
23	Honey Hall Red	20/11/29	1.056	0.80	0.22	8.0	9/12/29	1.030	1.021	R. J. Wear, Congresbury, Som.
24	Sour Hangdown	21/11/29	1.048	0.90	0.23	6.2	9/12/29	1.030	1.028	M. J. Pearce, Winford, Som.
25	Rough Coats	3/12/29	1.054	0.93	0.10	4.0	21/12/29	1.030	1.030	T. R. Price, Westhide, Her.
26	Hartisman	28/11/29	1.046	0.81	0.16	4.0	28/12/29	1.030	1.028	W. H. Hunt, Easton-in-Gordano, Som.

TABLE I.—continued.

CIDERS.		CLASS 2.—B. MEDIUM SHARP		VALETIES.		Acidity below 0.8 per cent.—		COMPETITION VARIETIES.		
27	White Sharp	..	22/10/29	1.051	0.68	0.14	3.3	18/12/29	1.030	W. H. Hunt, Easton-in-Gordano, Som.
28	Golden Ball No. 1	..	1/11/29	1.045	0.66	0.16	8.3	15/11/29	1.030	J. Bowditch, Stoke Abbott, Dorset.
29	Golden Ball No. 2	..	1/11/29	1.049	0.62	0.15	9.3	16/11/29	1.030	J. Bowditch, Stoke Abbott, Dorset.
30	Dymock Red	..	1/11/29	1.069	0.61	0.31	6.3	20/1/30	1.030	R. E. Turner, Dymock, Glos.
31	Strawberry Apple	..	4/11/29	1.058	0.64	0.28	6.2	4/12/29	1.030	E. T. Lewis, Madley, Her.
32	Red Streak	..	8/11/29	1.052	0.62	0.10	2.7	10/1/30	1.030	H. Knight, Huntley, Glos.
33	Stoke Red	..	8/11/29	1.053	0.48	0.09	5.0	5/12/29	1.030	E. W. Morgan, Wedmore, Som.
34	Stoke Red	..	11/11/29	1.054	0.51	0.25	4.8	9/12/29	1.030	H. H. Sealy, Rodney Stoke, Som.
35	Pages Yellow	..	12/11/29	1.063	0.69	0.17	5.2	8/1/30	1.030	Rt. Hon. Lord Bledisloe, Lydney, Glos.
36	Mullins White	..	21/11/29	1.058	0.48	0.21	6.0	12/12/29	1.030	J. Mullins, Dingeston, Mon.
37	Wallis	..	28/11/29	1.055	0.77	0.18	5.0	6/1/30	1.030	J. Crang, Kingsdon, Som.
38	Ansell	..	11/12/29	1.060	0.54	0.20	5.6	6/1/30	1.030	W. P. Merrett, Arlingham, Glos.
CLASS 3.—SWEET VARIETIES.—										
39	Morgan Sweet	..	15/10/29	1.059	0.32	0.14	8.2	11/11/29	1.020	R. J. Wear, Congresbury, Som.
40	Perthyras	..	22/10/29	1.053	0.37	0.17	7.4	14/11/29	1.020	A. T. Blake & Son, Monmouth.
41	Perthyras	..	22/10/29	1.057	0.30	0.16	8.4	11/11/29	1.020	E. J. Powell, Monmouth.
42	Perthyras	..	23/10/29	1.056	0.33	0.19	4.5	21/11/29	1.020	W. Beer, Abergavenny, Mon.
43	Eggleton Styre	..	24/10/29	1.053	0.33	0.15	7.0	14/11/29	1.020	F. Pole, Holmer, Her.
44	Perthyras	..	4/11/29	1.059	0.33	0.18	7.2	6/12/29	1.020	J. Mullins, Dingeston, Mon.
45	Sweet Alford	..	7/11/29	1.059	0.24	0.18	3.4	1/2/30	1.020	H. Daniel, Honiton, Devon.
46	Honeystring	..	8/11/29	1.051	0.23	0.17	5.5	9/12/29	1.020	G. Look, Shepton Mallet, Som.
47	Sweet Alford	..	12/11/29	1.062	0.25	0.16	5.2	4/2/30	1.020	J. T. Shield, Berkeley, Glos.
48	Woodbine	..	13/11/29	1.050	0.45	0.19	3.7	18/1/30	1.020	W. H. Arundell, Crediton, Devon.
49	Pound Apple	..	15/11/29	1.057	0.24	0.13	6.2	13/12/29	1.020	H. Daniel, Honiton, Devon.
50	Sweet Alford	..	21/11/29	1.060	0.27	0.14	4.6	20/3/30	1.020	W. J. Berry, Newton St. Cyres, Devon.
51	Wyatt's Seedling	..	25/11/29	1.054	0.39	0.14	4.2	17/1/30	1.020	W. J. Berry, Newton St. Cyres, Devon.
52	Woodbine	..	25/11/29	1.062	0.26	0.19	5.5	18/1/30	1.020	W. Hill, Kittisford, Som.
53	Berkeley Pippin	..	26/11/29	1.060	0.27	0.15	6.6	13/1/30	1.020	V. J. Davis, Berkeley, Glos.

TABLE I.—*continued.*  
COMPETITION VARIETIES.

No.	Name of Variety.	Date of making.	Specific Gravity of		Malic Acid per cent.	Tannin per cent.	Rate of fermentation.	Date of Filtering.	Specific Gravity of		Name and Address of Grower.	
			Fresh Juice.	at time of Filtering.					at time of Filtering.	May, 1930.		
CLASS 4.—BITTERSWEET VARIETIES—												
54	Royal George	..	15/10/29	1.055	0.25	0.22	4.5	25/11/29	1.025	1.025	W. H. Hunt, Easton-in-Gordano, Som.	
55	Belle Norman	..	23/10/29	1.052	0.33	0.22	5.7	13/11/29	1.025	1.025	A. Williams, Abergavenny, Mon.	
56	White Norman	..	24/10/29	1.057	0.21	0.31	3.4	7/1/30	1.025	1.025	W. R. Thomas, Nunnington, Her.	
57	Broadleaf Norman	..	29/10/29	1.052	0.23	0.18	7.0	21/11/29	1.025	1.023	E. V. V. Wheeler, Tenbury, Wor.	
58	Broadleaf Jersey	..	29/10/29	1.057	0.38	0.26	7.5	12/11/29	1.025	1.008	A. T. Blake & Son, Monmouth.	
59	Cherry Norman	..	29/10/29	1.060	0.31	0.23	6.6	5/12/29	1.025	1.024	W. Beer, Abergavenny, Mon.	
60	Belle Norman	..	1/11/29	1.059	0.34	0.19	7.2	27/11/29	1.025	1.023	C. F. Chapman, Westhide, Her.	
61	Cumny Norman	..	1/11/29	1.065	0.34	0.27	6.2	16/12/29	1.025	1.023	J. E. Edwards, Norton Canon, Her.	
62	Royal Wilding	..	4/11/29	1.064	0.31	0.26	5.7	14/12/29	1.025	1.023	Sir J. R. G. Cotterell, Bt., Bridge Sollers, Her.	
63	Knotted Kernel	..	7/11/29	1.064	0.32	0.35	3.1	3/2/30	1.025	1.025	J. E. Edwards, Norton Canon, Her.	
64	Dove	..	7/11/29	1.060	0.29	0.31	4.5	19/12/29	1.025	1.025	W. Wyatt, Kingweston, Som.	
65	Wyatt's Sweet	..	7/11/29	1.062	0.23	0.22	7.7	2/12/29	1.025	1.022	W. Wyatt, Kingweston, Som.	
66	Stable Jersey	..	8/11/29	1.060	0.29	0.37	9.0	27/11/29	1.025	1.021	G. Look, Shepton Mallet, Som.	
67	Sandford Jersey	..	8/11/29	1.059	0.27	0.41	5.5	16/12/29	1.025	1.024	T. G. Vincent, Shepton Mallet, Som.	
68	Strawberry Norman	..	12/11/29	1.059	0.37	0.35	7.0	18/12/29	1.025	1.024	J. P. Eley, Frampton Cotterell, Glos.	
69	Strawberry Norman	..	13/11/29	1.060	0.42	0.37	6.0	28/12/29	1.025	1.024	W. Houldey, Newent, Glos.	
70	Red French	..	14/11/29	1.062	0.28	0.25	6.7	4/1/30	1.025	1.024	R. T. Hincles, Mansel Court, Her.	
71	Cherry Norman	..	15/11/29	1.055	0.26	0.26	5.0	28/1/30	1.025	1.025	W. R. Thomas, Nunnington, Her.	
72	Counsellor	..	25/11/29	1.066	0.28	0.38	5.6	26/12/29	1.025	1.022	T. Fawkes, Leonard Stanley, Glos.	
73	Broadnose Jersey	..	25/11/29	1.061	0.28	0.23	7.1	30/12/29	1.025	1.023	A. G. Barber, Ditcheat, Som.	
74	French	..	26/11/29	1.047	0.24	0.24	5.5	16/12/29	1.025	1.023	W. Beer, Abergavenny, Mon.	
75	French	..	27/11/29	1.060	0.28	0.33	6.3	16/12/29	1.025	1.023	A. T. Blake & Son, Monmouth.	
76	Hatcher	..	29/11/29	1.065	0.32	0.21	6.4	2/1/30	1.025	1.022	N. H. Padfield, Corse, Wor.	
77	Chisel Jersey	..	29/11/29	1.060	0.27	0.34	5.6	6/1/30	1.025	1.025	T. H. Colledge, Shepton Mallet, Som.	
78	Chisel Jersey	..	29/11/29	1.051	0.23	0.32	4.8	10/1/30	1.025	1.025	T. R. Vincent, Shepton Mallet, Som.	
79	Royal Wilding	..	3/12/29	1.060	0.29	0.31	4.0	27/1/30	1.025	1.025	T. R. Price, Westhide, Her.	
80	Dabinett	..	3/12/29	1.046	0.26	0.23	3.4	18/12/29	1.025	1.025	J. Baker, Bassaleg, Mon.	

TABLE I.—*continued*.  
COMPETITION VARIETIES.

## CIDERS.

## CLASS 5.—MIXED VARIETIES—

81	Perthyres 7, Eggle- ton Styre 4, Fred- erick 2½, Red Apple 1½ .. ..	22/10/29	1.057	0.44	0.17	7.4	11/11/29	1.025	1.023	A. T. Blake & Son, Monmouth.
82	Foxwhelp 1, Sweet Alford 2, Perthyres 9, Frederick 3 ..	23/10/29	1.053	0.49	0.19	5.7	18/11/29	1.025	1.023	W. Beer, Abergavenny, Mon.
83	White Hangdown 8, Strode Sharp 2, Strode Bittersweet 5	23/10/29	1.055	0.57	0.21	5.0	22/11/29	1.025	1.025	M. J. Pearce, Winford, Som.
84	Nempnett Sweet 10, Nempnett Sharp 4, Nempnett Mild Sharp 1 .. ..	29/10/29	1.054	0.42	0.14	7.0	15/11/29	1.025	1.017	A. Daunton, Nempnett, Som.
85	Kingston Black 3, Hangdown 4, Slack- ma-Girdle 4, Sour Natural 4 .. ..	29/10/29	1.054	0.47	0.21	8.0	18/11/29	1.025	1.021	W. H. Arundell, Crediton, Devon.
86	Sweet Alford 4, Sweet Coppin 2, Plym- trees Sour 5, Trem- lett's Bitter 4 ..	29/10/29	1.054	0.53	0.17	6.0	7/12/29	1.025	1.024	J. W. Hussey, Cullompton, Devon.
87	Golden Ball 10, Jays 5 .. ..	1/11/29	1.051	0.54	0.18	7.7	3/12/29	1.025	1.024	J. Bowditch, Stoke Abbott, Dorset.
88	Fair Maid of Devon 5, Sweet Alford 5, Pocket Apple 5 ..	8/11/29	1.051	0.35	0.14	3.7	31/12/29	1.025	1.024	H. Hoare, Buckfastleigh, Devon.

TABLE I.—*continued*.

## CIDERS.

## COMPETITION VARIETIES.

No.	Name of Variety.	Date of making.	Specific Gravity of Fresh Juice.	Malic Acid per cent.	Tannin per cent.	Rate of fermentation.	Date of Filtering.	Specific Gravity at time of May, Filtering. 1930.	Specific Gravity	Name and Address of Grower.
CLASS 5.—MIXED VARIETIES— <i>continued</i> .										
89	Redwood Bitter 6, Devonshire Dossets 2, Redwood Sweet 4, Redwood Sharp 3	11/11/29	1.053	0.58	0.31	6.3	12/12/29	1.025	1.025	F. Reynolds, Barrow Gurney, Som.
90	Pages Yellow 5, Table Top 5, Briee's Kernel 5 ..	12/11/29	1.055	0.64	0.17	7.0	6/12/29	1.025	1.025	Rt. Hon. Lord Bledisloe, Lydney, Glos.
91	Strawberry Norman 5, Frederick 6, Styre Wilding 4 ..	12/11/29	1.051	0.58	0.20	3.8	9/1/30	1.025	1.024	A. Williams, Abergavenny, Mon.
92	Foxwhelp 2, King- ston Black 4, Sweet Alford 7, Knotted Kernel 2 ..	12/11/29	1.059	0.40	0.22	5.0	4/1/30	1.025	1.024	J. P. Eley, Frampton Cotterell, Glos.
93	Chisel Jersey 4, Berkeley Pippin 3, Honey Red 4, Kingston Black 4	13/11/29	1.057	0.73	0.16	5.7	21/12/29	1.025	1.025	R. J. Wear, Congresbury, Som.

TABLE I.—*continued.*

## COMPETITION VARIETIES.

## CIDERS.

CLASS 5.—MIXED VARIETIES—*continued.*

94 Sweet Alford 5, Royal Jersey 3, Yarlington Mill 4½, Cadbury 2½ ..	13/11/29	1.059	0.29	0.24	5.0	4/1/30	1.025	1.025	H. Hawkins, Brookthorpe Court, Glos.
95 Cap of Liberty 5, Royal Jersey 5, White Jersey 5	13/11/29	1.064	0.38	0.27	5.4	17/1/30	1.025	1.025	J. C. Moody, East Pennard, Som.
96 Red Streak 5, Royal Wilding 4, Green French 6 ..	14/11/29	1.058	0.40	0.22	8.3	18/12/29	1.025	1.023	R. T. Hinckes, Mansel Court, Her.
97 Kingston Black 5, Sharp Apple 4, Strawberry Nor- man 6 ..	15/11/29	1.057	0.47	0.24	3.7	28/1/30	1.025	1.024	J. E. Edwards, Norton Canon, Her.
98 Hangdown 5, King- ston Black 5, Bitter Pullins 2, Bitter Wines 3 ..	15/11/29	1.064	0.38	0.20	5.0	3/1/30	1.025	1.023	A. Dibble, Ilminster, Som.
99 Chisel Jersey 7, Sweet Alford 4, Fair Maid of Devon 4 ..	15/11/29	1.048	0.39	0.20	5.0	20/1/30	1.025	1.024	J. Baker, Bassaleg, Mon.
100 Kingston Black 5, Wallis 5, Hang- down 5 ..	15/11/29	1.056	0.54	0.22	5.2	16/1/30	1.025	1.025	J. F. Day, Edingworth, Som.
101 White Crab 7, Chat- ley Apple 8 ..	15/11/29	1.057	0.83	0.24	6.2	9/1/30	1.025	1.025	T. H. Brookes, Cheltenham, Glos.

TABLE I.—*continued*.

## CIDERS.

## COMPETITION VARIETIES.

No.	Name of Variety.	Date of making.	Specific Gravity of Fresh Juice.	Malic Acid per cent.	Tannin per cent.	Rate of fermentation.	Date of Filtering.	Specific Gravity at time of Filtering.	Specific Gravity of May, 1930.	Name and Address of Grower.
CLASS 5.—MIXED VARIETIES— <i>continued</i> .										
102	Hartisman 2, White Sharp 3, White Georges 5, Bastard Tom Putt 5 ..	20/11/29	1.048	0.74	0.24	2.8	14/2/30	1.025	1.025	W. H. Hunt, Easton-in-Gordano, Som.
103	Red Streak, 5, Woodbine 5, Cap of Liberty 2, Red Jersey 3 ..	20/11/29	1.056	0.56	0.22	5.2	17/1/30	1.025	1.024	R. J. Denning, Ilminster, Som.
104	Hangdown 4, Marshall's Bittersweet 3, Regil Red Streak 4, Strode Red Streak 4 ..	20/11/29	1.057	0.65	0.30	5.0	20/1/30	1.025	1.023	B. Pearce, Winford, Som.
105	Eggleton Styre 6, Kingston Black 4, Rouge Bruyere 2, Backwell Red 3 ..	20/11/29	1.063	0.37	0.19	5.3	11/1/30	1.025	1.025	J. T. Shield, Berkeley, Glos.
106	Perthryes 5, Frederick 5, Golden Styre 5 ..	21/11/29	1.051	0.51	0.13	6.6	9/12/29	1.025	1.023	S. W. Mullins, Raglan, Mon.

TABLE I.—*continued.*

CIDERS.		COMPETITION VARIETIES.									
CLASS 5.—MIXED VARIETIES— <i>continued.</i>											
107	Frederick 5, Golden Ball 3, Perthryes 5, King of the Orchard 2 ..	21/11/29	1.055	0.63	0.11	7.2	7/1/30	1.025	1.023	J. Mullins, Dingestow, Mon.	
108	Kingston Black 5, Eggleton Styre 4, Sweet Alfred 3, Strawberry Norman 3 ..	25/11/29	1.066	0.34	0.22	5.1	5/2/30	1.025	1.025	H. T. Phelps, Tibberton, Glos.	
109	Five Apple 5, Port Wine Jersey 5, Chisel Jersey 5 ..	25/11/29	1.055	0.33	0.32	4.5	14/1/30	1.025	1.025	T. G. Vincent, Shepton Mallet, Som.	
110	Tale Sour 7, Woodbine 5, Tale Bitter 3	25/11/29	1.056	0.49	0.25	6.8	30/12/29	1.025	1.024	H. Daniel, Honiton, Devon.	
111	Kingston Black 5, Royal Jersey 3, Yarlington Mill 4, Cap of Liberty 3	25/11/29	1.060	0.46	0.30	5.3	18/2/30	1.025	1.024	A. G. Barber, Ditcheat, Som.	
112	Brown Snout 5, Cummy Norman 5, Philmander 5 ..	26/11/29	1.063	0.54	0.33	8.5	30/12/29	1.025	1.023	C. F. Chapman, Westhide, Her.	
113	Kingston Black 3, Dabinett 4, Porter's Perfection 4, Jersey 4 ..	27/11/29	1.061	0.48	0.33	4.5	17/1/30	1.025	1.024	G. J. Tatchell, East Lambrook, Som.	



TABLE I.—continued.

## PERRIES.

## COMPETITION VARIETIES.

No.	Name of Variety.	Date of making.	Specific Gravity of Fresh Juice.	Malic Acid per cent.	Tannin per cent.	Rate of fermentation.	Date of Filtering.	Specific Gravity at time of Filtering.	Specific Gravity of May, 1930.	Name and Address of Grower.
CLASS 6.—PERRIES—										
114	Moorcroft	15/10/29	1.069	0.49	0.13	5.0	16/12/29	1.030	1.028	J. Lloyd, Newent, Glos.
115	Blakeney Red	15/10/29	1.068	0.40	0.17	3.7	10/12/29	1.030	1.030	J. Lloyd, Newent, Glos.
116	Green Huffcap	15/10/29	1.066	0.48	0.15	7.4	20/11/29	1.030	1.028	J. Lloyd, Newent, Glos.
117	Blakeney Red	21/10/29	1.047	0.36	0.14	2.1	18/12/29	1.030	1.030	W. P. Merrett, Arlingham, Glos.
118	Blakeney Red	21/10/29	1.052	0.42	0.10	3.1	10/12/29	1.030	1.029	A. T. Blake & Son, Monmouth.
119	Betty Prosser	21/10/29	1.065	0.56	0.09	5.8	18/12/29	1.030	1.029	A. T. Blake & Son, Monmouth.
120	Blakeney Red	22/10/29	1.062	0.52	0.21	4.0	6/1/30	1.030	1.029	E. J. Powell, Monmouth.
121	Blakeney Red	22/10/29	1.058	0.42	0.16	2.6	20/1/30	1.030	1.030	H. Knight, Huntley, Glos.
*122	Aylton Red	22/10/29	1.061	0.34	0.13	3.8	19/12/29	1.030	1.030	H. Knight, Huntley, Glos.
123	Runny Bobs	24/10/29	1.054	0.93	0.11	4.2	12/12/29	1.030	1.027	P. E. Bomford, Upton Snodsbury, Wor.
124	Red Horse Pear	24/10/29	1.056	0.72	0.15	5.6	26/11/29	1.030	1.029	P. E. Bomford, Upton Snodsbury, Wor.
125	Blakeney Red	24/10/29	1.058	0.49	0.15	4.6	20/12/29	1.030	1.030	R. E. Turner, Dymock, Glos.
126	Holmer	24/10/29	1.067	0.77	0.21	5.4	24/1/30	1.030	1.030	F. Pole, Holmer, Her.
127	Blakeney Red	24/10/29	1.060	0.57	0.13	4.8	16/12/29	1.030	1.029	R. Hyett, Dymock, Glos.
128	Blakeney Red	29/10/29	1.055	0.38	0.10	4.2	16/12/29	1.030	1.028	W. Houldey, Newent, Glos.
129	Blakeney Red	1/11/29	1.055	0.47	0.13	4.2	18/12/29	1.030	1.030	A. L. Thomas, Manson, Mon.
130	Blakeney Red	4/11/29	1.051	0.40	0.11	3.2	9/12/29	1.030	1.030	J. Mullins, Dingestow, Mon.
131	Oldfield ?	8/11/29	1.051	0.21	0.23	3.6	2/12/29	1.030	1.027	T. H. Brooks, Cheltenham, Glos.
132	Blakeney Red	11/11/29	1.046	0.31	0.08	4.1	6/12/29	1.030	1.027	Rt. Hon. Lord Bledisloe, Lydney, Glos.
133	Blakeney Red	11/11/29	1.049	0.29	0.10	4.0	18/12/29	1.030	1.030	T. R. Price, Westhide, Her.
134	Oldfield ?	13/11/29	1.059	0.37	0.12	9.0	18/12/29	1.030	1.029	G. Cobb, Dymock, Glos.
135	Russell Pear	26/11/29	1.056	0.54	0.11	9.2	9/12/29	1.030	1.020	H. Knight, Huntley, Glos.
136	Oldfield	26/11/29	1.063	0.65	0.13	3.8	27/2/30	1.030	1.030	H. Knight, Huntley, Glos.

TABLE I.—*continued*.  
COMPETITION VARIETIES.

CLASS 6.—PERRIES— <i>contd.</i>												
137	Oldfield	..	..	26/11/29	1.061	0.62	0.11	4.0	4/3/30	1.030	1.030	W. Houldey, Newent, Glos.
138	Oldfield	..	..	26/11/29	1.063	0.61	0.09	4.6	27/2/30	1.030	1.029	C. G. Ricketts, Dymock, Glos.
139	Oldfield	..	..	26/11/29	1.067	0.70	0.10	4.2	14/3/30	1.030	1.030	L. Kemp, Brookthorpe, Glos.
140	Oldfield	..	..	26/11/29	1.063	0.58	0.10	4.0	1/4/30	1.030	1.030	F. Pole, Holmer, Her.
141	Oldfield	..	..	26/11/29	1.064	0.62	0.09	4.2	3/4/30	1.030	1.030	T. R. Price, Westhide, Her.
142	Oldfield	..	..	26/11/29	1.066	0.69	0.09	4.2	5/3/30	1.030	1.030	N. H. Padfield, Corse, Wor.
143	Huffcap	..	..	26/11/29	1.063	0.46	0.10	7.1	23/12/29	1.030	1.028	C. J. Ricketts, Dymock, Glos.
144	Butt	..	..	27/11/29	1.062	0.53	0.39	3.3	10/4/30	1.030	1.030	W. Houldey, Newent, Glos.
145	Butt	..	..	27/11/29	1.057	0.50	0.36	2.3	14/4/30	1.030	1.030	T. H. Brookes, Cheltenham, Glos.
146	Butt	..	..	27/11/29	1.059	0.53	0.38	2.0	15/4/30	1.030	1.030	L. Kemp, Brookthorpe, Glos.
147	Butt	..	..	27/11/29	1.058	0.52	0.38	1.1	14/4/30	1.030	1.030	H. Knight, Huntley, Glos.
148	Lumber Pear	..	..	3/12/29	1.048	0.52	0.23	2.8	10/1/30	1.030	1.029	G. E. Bubb, Westbury-on-Severn, Glos.
CIDERS MADE FROM THE LONG ASHTON TRIAL CIDER ORCHARD—												
Cap of Liberty	..	..	..	28/11/29	1.048	0.76	0.25	2.1	2/1/30	1.030	1.030	
Ashton Red	..	..	..	28/11/29	1.043	0.35	0.16	4.3	13/12/29	1.025	1.024	
Reinette Obry	..	..	..	7/11/29	1.050	0.48	0.10	7.0	29/11/29	1.025	1.022	
Dabinett	..	..	..	18/12/29	1.050	0.21	0.16	5.0	27/1/30	1.025	1.023	
Chisel Jersey	..	..	..	28/11/29	1.046	0.30	0.30	2.1	23/1/30	1.025	1.025	
M. Jacques	..	..	..	28/11/29	1.047	0.35	0.40	3.0	30/12/29	1.025	1.020	
Medaille d'Or	..	..	..	28/11/29	1.042	0.26	0.41	2.0	30/12/29	1.025	1.023	
CIDERS MADE FROM BLENDS OF CULINARY AND BITTERSWEET APPLES—												
Bramley's Seedling	..	..	..	18/12/29	1.045	0.84	0.10	9.4	31/12/29	1.025	1.020	
$\frac{1}{2}$ Bramley's Seedling + $\frac{1}{2}$ Dabinett	..	..	..	18/12/29	1.047	0.75	0.14	9.4	3/1/30	1.025	1.022	
$\frac{1}{2}$ Bramley's Seedling + $\frac{1}{2}$ Dabinett	..	..	..	18/12/29	1.047	0.50	0.15	7.0	6/1/30	1.025	1.022	
$\frac{1}{2}$ Bramley's Seedling + $\frac{1}{2}$ Dabinett	..	..	..	18/12/29	1.047	0.45	0.16	8.4	8/1/30	1.025	1.022	
Dabinett	..	..	..	18/12/29	1.050	0.21	0.16	5.0	27/1/30	1.025	1.023	

TABLE II.

## COMPETITION CIDERS AND PERRIES, 1929-30.

## JUDGES' AWARDS.

## CIDERS.

Class 1.		No.	KINGSTON BLACK. (12 Entries).	
First Prize	..	12	W. R. Thomas, Nunnington, Hereford.	
Second Prize	..	2	H. E. Dabinett, Somerton, Som.	
Third Prize	..	8	P. E. Bomford, Upton Snodsbury, Wor.	
Fourth Prize	..	10	W. H. Hunt, Easton-in-Gordano, Som.	
Reserve	..	7	H. C. Davis, Hewish, Som.	
Very Highly Com'ded		9	R. J. Denning, Ilminster, Som.	
Class 2. A.		No.	SHARP VARIETIES. (Acidity 0.8% or above).	
		(14 Entries).		Variety.
First Prize	..	22	W. Maynard, Martock, Som.	Cap of Liberty.
Second Prize	..	21	E. Hodges, Martock, Som.	Cap of Liberty.
Third Prize	..	18	J. Mullins, Dingestow, Mon.	Frederick.
Fourth Prize	..	19	W. P. Merrett, Arlingham, Glos.	Cowarne Red.
Reserve	..	17	A. L. Thomas, Manson Farm, Mon.	Frederick.
Very Highly Com'ded		15	W. Beer, Abergavenny, Mon.	Frederick.
Class 2. B.		MEDIUM SHARP VARIETIES (Acidity below 0.8%).		Variety.
		(12 Entries).		
First Prize	..	32	H. Knight, Huntley, Glos.	Red Streak.
Second Prize	..	38	W. P. Merrett, Arlingham, Glos.	Ansell.
Third Prize	..	30	R. E. Turner, Dymock, Glos.	Dymock Red.
Fourth Prize	..	36	J. Mullins, Dingestow, Mon.	Mullin's White.
Reserve	..	37	J. Crang, Kingsdon, Som.	Wallis.
Very Highly Com'ded		34	H. H. Sealy, Rodney Stoke, Som.	Stoke Red.
Class 3.		SWEET VARIETIES. (15 Entries).		
First Prize	..	50	W. J. Berry, Newton St. Cyres, Devon	Sweet Alford.
Second Prize	..	44	J. Mullins, Dingestow, Mon.	Perthyres.
Third Prize	..	49	H. Daniel, Honiton, Devon	Pound Apple.
Fourth Prize	..	45	H. Daniel, Honiton, Devon	Sweet Alford.
Reserve	..	46	G. Look, Shepton Mallet, Som.	Honeystring.
Very Highly Com'ded		52	W. Hill, Kittisford, Som.	Woodbine.

**Class 4. BITTERSWEET VARIETIES. (27 Entries).**

First Prize	.. 71	W. R. Thomas, Nunington, Hereford .. .. .	Cherry Norman.
Second Prize	.. 79	I. R. Price, Westhide, Hereford	Royal Wilding.
Third Prize	.. 62	Sir J. R. G. Cotterell, Bridge Sollers .. .. .	Royal Wilding.
Fourth Prize	.. 63	J. E. Edwards, Norton Canon, Her. .. .. .	Knotted Kernel.
Reserve .. .. .	76	N. H. Padfield, Corse, Wor. ..	Hatcher.
Very Highly Com'ded	75	A. T. Blake & Son, Monmouth	French.

**Class 5. MIXED VARIETIES. (33 Entries).**

First Prize	.. 108	H. J. Phelps, Tibberton, Glos.	
Second Prize	.. 113	G. J. Tatchell, East Lambrook, Som.	
Third Prize	.. 105	J. T. Shield, Berkeley, Glos.	
Fourth Prize	.. 111	A. G. Barber, Ditchheat, Som.	
Reserve .. .. .	95	J. C. Moody, East Pennard, Som.	
Very Highly Com'ded	88	H. Hoare, Buckfastleigh, Devon.	

**Class 6. PERRIES. (35 Entries). Variety.**

First Prize	.. 114	J. Lloyd, Newent, Glos. ..	Moorcroft.
Second Prize	.. 138	C. G. Ricketts, Dymock, Glos.	Oldfield.
Third Prize	.. 140	F. Pole, Holmer, Her. ..	Oldfield.
Fourth Prize	.. 141	I. R. Price, Westhide, Her. ..	Oldfield.
Reserve .. .. .	139	Mrs. L. Kemp, Brookthorpe, Glos. .. .. .	Oldfield.
Very Highly Com'ded	125	R. E. Turner, Dymock, Glos.	Blakeney Red
Very Highly Com'ded	127	R. Hyett, Dymock, Glos. ..	Blakeney Red.

**THE PRODUCTION OF CRICKET BAT TIMBER.**

*By H. P. Hutchinson.*

At the present time there is a shortage of willow timber suitable for the making of cricket bats. This shortage is due to a considerable extent to the increasing popularity of the game whereby there is an increasing demand for bats both at home and abroad. In 1930 bat willow timber sold at 21/- per cubic foot standing, but it is essential if this high price is to be realised that the timber should conform in character to the bat makers' requirements in being straight in the grain, uniform in texture, tough, of a suitable weight relative to its volume and white in colour.

The following information, which has been collected from various sources, may be helpful to growers for the production of timber of good commercial quality.

The factors which determine timber quality are, to a great degree, controllable and may be considered under the following headings:—

*Variety.*

The English willows—*Salix alba*, *S. fragilis*, varieties and hybrids of these species—possess characters in their timbers which render them all suitable for bat making, but in varying degrees. The true cricket bat willow—*S. alba* var. *Caerulea*—is so superior to the rest as to justify its being planted not only for the production of bat timber but for all economic purposes in preference to any other variety of tree willow. The present scarceness of *Caerulea* trees is, in the main, due to the fact that in the extensive plantings which have taken place during the last twenty-five years many thousands of other varieties have been substituted for it. This misfortune has arisen chiefly as a result of ignorance on the parts of both buyers and sellers of the sets, and to a great extent is excusable because sets of *Caerulea*, whether long or short, are indistinguishable in their botanical characters from sets of several other tree varieties. In the first case, therefore, the planter should take the utmost care in assuring himself that all his sets have been obtained from a reliable source.

*The Set.*

The set consists of a rod from which the side branches have been removed. It should be from 12 to 15 feet in length, straight and

sufficiently rigid to maintain a vertical position after planting without the aid of a stake. Rods of one year's growth are frequently of the required length, but if used as sets are too supple to withstand wind pressure without bending. In such cases the tree is deteriorated in value on account of curvatures which arise in the bole. Rods of from two to four years' growth are satisfactory. The best sets are produced from willow trees which have been pollarded when in the prime of growth or from short cuttings which have been specially planted in the nursery for the production of long sets. One-year-old sets from 4 to 10 feet in length are sometimes planted. Although such sets root readily, they, in contrast with the longer, stouter sets, have the disadvantages of being more subject to injury by wind and animal attacks, and in requiring considerable attention in staking and in securing a sufficient length of straight bole. Sets which have been allowed to root in the nursery for a year or two, so becoming young trees, are sometimes planted, but under equal growth conditions the presence of the root does not appear to give any advantage in growth over the unrooted set.

A crooked set is objectionable because permanent wood curvature is set up and the timber is not straight grained. The presence of a kink in the set results in an uneven distribution of wood in its neighbourhood which may persist throughout the lifetime of the tree. In such cases the clefts into which the logs are split are curved on their inner faces, the result being that excessive waste of timber occurs in the later stages of manufacture. It is the trunk of the tree only which is required by the bat maker, the upper parts being discarded. As the best timber is contained in the lowest part of the bole, it is good policy for the grower to arrange that the tree shall form the maximum amount of wood as near the ground as circumstances will permit. The bat maker is suited when he can obtain 4 bat lengths, i.e. 4 sets of clefts each 29-30 inches in length between ground level and the primary branches. With this requirement in mind sets 12-15 feet in length would ultimately form trees of the desired bole size, 2 feet to 2 feet 6 inches of the set being in the ground, 10-12 feet forming the clean trunk and bases of the main branches. Sets, 20 feet or more in length, are sometimes planted. These develop into "poley" trees, which contain a larger proportion of upper inferior timber than corresponding trees of the bole length recommended. Nor do they have the advantage of yielding a greater total weight of bat wood; it may be less owing to the waste of timber due to the many short branches which easily escape notice when they first arise.

*Soil Conditions.*

The only criterion of the value of any soil for bat willow production is the rate at which it is capable of producing mature trees, the two terms being directly proportional. Judging from observations the soil should be rich in plant food and the water supply should be adequate. When favourably placed the willow develops an extensive root system. Rootlets develop as finely divided matted masses in running water so forming an extensive water-absorbing organ. Evaporation is correspondingly provided for in the leaves which, by being numerous, thin and having stomata on both sides, form a large evaporating surface. The state in which the water exists in the neighbourhood of the roots is of the greatest importance. A bat willow tree will continue to live many years, but will not thrive, on waterlogged land. A running stream with open textured well-drained soil affords the best conditions for rapid growth. Many types of soil grading from gravels to marls conform with these requirements. Suitable sites are to be found on the banks of streams, the margins of ponds, lakes and wet areas. The distances between one tree and the next should be from 25 to 30 feet. The best timber is obtained from trees growing in single line or as narrow belts. Growth is less satisfactory when the block system of planting is adopted. The trees growing in the inner parts of such plantations are frequently inferior to those on the outsides, a result of inadequate drainage at these places. Sewage farms produce first-class bat willows where the soil medium is rich and large quantities of water are kept in a state of motion. Many areas could be made more suitable for bat willows if steps were taken to secure a more rapid removal of water by the construction of surface drains.

*Attention During Growth.*

During the first summer after planting the set develops roots and shoots. As the motion of the young plant due to wind action is liable to cause an opening to appear in the soil around the base of the stem whereby young roots become broken, frequent inspections are necessary. Any gaps which appear should be closed by pressing the soil back firmly. Many buds will arise throughout the length of the stem. The general recommendation now is that these buds should be rubbed off to a height of 11 feet as soon as they appear. Experiments at this station have shown that the presence of lateral shoots during the first year is advantageous in increasing the rate of growth of the plant as a whole, including

thickening of the stem, but this practice cannot be recommended because it is not yet known what the after-effects on the wood will be. It is possible that the presence of the scars caused by the pruning of the lateral shoots at the end of the first year may have such a pronounced and lasting effect through subsequent uneven wood formation as to seriously impair the value of the timber.

The set is subject to very severe damage by ground game and farm stock. Rabbits and hares gnaw the bark, causing severe injury or death. The use of deterrent preparations smeared on the bark or the fixing of a collar of wire netting about 3 feet in depth close to the stem has been found to be satisfactory in affording adequate protection against these pests. The latter method is also satisfactory against gnawing and rubbing by sheep. Cattle and horses if allowed access to the trees will cause great damage by eating the tops. A fence consisting of a single strand of barbed wire and posts is sufficient for protection in this case.

Buds will continue to develop on the stem for the first three or four years following planting, but the number gradually diminishes as true bark develops. They should be rubbed off as soon as observed.

### *The Use of Fertilisers.*

Bat willow growers know the importance of securing the greatest rapidity of growth of their trees and requests are frequently made by them for advice on the use of fertilisers. As no experimental work on the subject has yet been carried out as far as tree willows are concerned, direct advice is not obtainable, but reasoning from the analogous case of basket willows, on which a considerable amount of research and experimental work has been done, it may be inferred that the application of nitrogenous and phosphatic manures would be valuable. This inference is supported by evidence afforded by trees grown in situations where organic matter is plentiful, such as Sewage Farms and sites near farmyard manure heaps. The method of application of fertilisers would depend on the particular location of the trees. In most cases, in order to obtain full advantage of the fertilisers applied, it would be necessary to remove the vegetation for a distance of two or three yards from the base of the trees, to dig the surface and to apply the manure in the early spring.

### *Maturity.*

A bat willow is ready for sale when, at 5 feet above ground level, the quarter girth is 8½ inches. In favourable situations this size



is reached in 12 to 15 years from the date of planting, but cases are known where, owing to particularly favourable conditions, the required size has been attained in 9 years, which means that, starting with a set of  $1\frac{1}{2}$  inches in diameter, a layer of new wood over  $\frac{1}{2}$  inch in thickness has been added annually.

The following information is extracted from growth records of 6 bat willow trees now growing on the Experimental Willow Plots of the Research Station, Long Ashton :—

GIRTH MEASUREMENTS IN CENTIMETRES TAKEN AT 5 FEET ABOVE  
GROUND LEVEL.

Tree No.	1928. Planting Date.	1928.	1929.	1930.
	April 3.	Nov. 17.	Nov. 13.	Oct. 28.
1	13.3	15.6	19.4	24.5
2	13.5	15.5	19.6	24.1
3	14.1	15.8	21.4	26.7
4	14.1	15.4	20.5	25.8
5	12.4	15.2	23.3	33.5
6	14.9	16.7	24.6	35.3

The trees are now growing on a bank at the foot of which is a small stream, generally dry in summer. The distances apart are 20 feet. The trees Nos. 5 and 6 were planted near the site of an old manure heap. If the rates of growth hitherto made be maintained, trees Nos. 1 to 4 and Nos. 5 and 6 will be large enough for cutting in 17 and 11 years respectively from the date of planting.

# Bath and West and Southern Counties Society.

## TORQUAY MEETING, 1930.

### JUDGES.

#### HORSES.

**Shire.**—W. J. CUMBER, Theale, Berks.

**Hunters.**—Col. C. SPENCE-COLBY, Donnington Hall, Ledbury.

**Arabs.**—Lt.-Col. E. C. LOCH, O.B.E., Parks, Crediton, Devon.

**Polo and Riding Ponies.**—Major H. FAUDEL PHILLIPS, Badbury Wick, Swindon.

**Shetland Ponies.**—J. P. SLEIGH, St. John's Wells, Fyvie.

**Dartmoor.**—R. B. PHILLPOTTS, Rora House, Liverton, Newton Abbot, Devon.

**Hack and Riding Pony and Driving.**—F. VIVIAN GOOCH, Homeleigh Heath, Park Road, Leighton Buzzard.

**Ladies' Hacks.**—Mrs. HESELTINE, Manor House, Berwick St. John, Shaftesbury.

**Jumping.**—Sir H. H. A. HOARE, Bart., Stourhead, Zeals, Wilts.

#### CATTLE.

**Devon.**—C. BRENT, Clampit, Callington, Cornwall.

**South Devon.**—B. LUSCOMBE, Bowden, Yealmpton, S. Devon.

**Dairy South Devon.**—J. E. FURNEAUX, Higher Longcombe, Berry Pomeroy, nr. Totnes.

**Shorthorn.**—J. M. STRICKLAND, Bainesse, Catterick, Yorks.

**Dairy Shorthorn.**—S. R. SHERWOOD, 2, Lattice Avenue, Ipswich.

**Hereford.**—H. R. EVANS, Marston House, Pembridge, Herefordshire.

**Sussex.**—T. BANNISTER, Limehurst, Haywards Heath.

**British Friesian.**—C. H. HARDING, Manor Farm, Grittleton, Chippenham.

**Aberdeen-Angus.**—J. M. BURR, Estate Office, Hall Place, Tonbridge, Kent.

**Red Poll.**—J. H. LACHLAN WHITE, Bredfield House, Woodbridge, Suffolk.

**Ayrshire.**—Hon. G. CORBETT, Rowallan, Kilmarnock.

**Jersey.**—W. E. BUDGETT, Henbury, near Bristol.

**Guernsey.**—J. CHALMERS, Plawhatch Farm, Sharpthorne, Sussex.

**Dexter.**—Mrs. H. J. NUTT, Eastham House, Mytton, Whalley, Lancs.

## SHEEP.

**Devon Longwoolled.**—W. G. BRENT, Warrens Park, Congdon Shop, Launceston, Cornwall.

**Devon Close Wool.**—A. W. FRIEND, Brightlycott, Barnstaple, N. Devon.

**Hampshire Down.**—B. J. WATERS, Flametone, Bishopstone, Salisbury.

**Oxford Down.**—W. H. HITCH, Elkstone Manor, near Cheltenham.

**Dorset Horn.**—A. A. BROUGHTON, Impens, North Petherton, Bridgwater.

**Dorset Down.**—H. R. WATSON, Milborne Wick, Sherborne.

**Exmoor Horn.**—J. ROBINS, Wallover, Bratton Fleming, North Devon.

**Dartmoor.**—A. ALFORD, Cardwell, Milton Abbot, Tavistock.

**Suffolk.**—S. R. SHERWOOD, 2, Lattice Avenue, Ipswich.

**Ryeland.**—F. MORRIS, Brynderwen Farm, Talyllyn, Breconshire.

**Kerry Hill.**—T. J. EVANS, Dinchope, Craven Arms, Salop.

## GOATS.

S. WOODIWISS, Graveleys, Great Waltham, Essex.

## PIGS.

**Berkshire.**—F. TOWNEND, Highfield, Moor Allerton, Leeds.

**Large Black.**—G. H. HIRST, Mere Farm, Burton Fleming, Driffeld, Yorks.

**Large White.**—A. W. WHITE, Hillegom, Spalding, Lincs.

**Middle White.**—Lt.-Col. W. LLEWELLEN PALMER, M.C., Bearfield House, Bradford-on-Avon, Wilts.

**Tamworth.**—C. L. COXON, Milton, Pembridge, near Leominster.

**Gloucestershire Old Spots.**—R. H. HOLE, Clapcote, Grittleton, Chippenham.

**Wessex Saddleback.**—Dr. W. H. FORSHAW, Slythehurst, Ewhurst, Guildford, Surrey.

**National Long White Lop-Eared.**—Major E. A. H. GROOM, East Hall Docking, Norfolk.

**Bacon Pigs.**—Col. F. S. KENNEDY SHAW, C.B.E., Kings Orchard, Teffont Magna, near Salisbury.

## POULTRY AND EGGS.

J. S. PARKIN, Stanbridge Earls Poultry Farm, Romsey, Hants (Classes 1 to 25, 46 to 53, 56 to 59, and 74 to 76).

C. WATSON, Oxhey, Watford (Classes 1, 26 to 45, 54 to 55, and 60 to 76).

PIGEONS.

E. J. LEWIS, 15, Park Avenue, Bideford.

RABBITS.

H. W. HARDING, 24, Stuart Street, Warwick Road, Bristol.

PRODUCE.

**Cider.**—STAFFORD WESTON, Much Marcle, Herefordshire.

**Cheese.**—J. H. MACKIE, Castle Cary, Somerset.

**Cream Cheese, Butter and Cream.**—MRS. M. GIBSON, N.D.D., B.F.D.D., Knapp Farm, Whitestaunton, near Chard.

COMPETITIONS.

**Butter-Making.**—Miss A. MATTHEWS, Avonwen, Heenan Road, Old Colwyn, N. Wales (Classes 236 to 239), and A. TODD, British Dairy Institute, Reading (Class 240).

**Junket Making.**—MRS. M. GIBSON, N.D.D., B.F.D.D., Knapp Farm, Whitestaunton, near Chard.

**Shoeing.**—J. C. MORRIS, F.W.C.F., 115, St. Vincent Street, Ladywood Birmingham.

**Live Stock Judging.**—J. S. TOOLEY, Tor Dean, Buckfastleigh.

**Sheep Shearing.**—W. MADDICOTT, C.A., Dainton House, Ipplepen, S. Devon.

**Poultry Trussing.**—H. C. BUCKLAND, Ovator Poultry Farm, Torrington.

**Rope and Spar Making.**—S. CURSONS, Small Lake, Dunsford, Devon.

**Lobster Pot Making.**—T. H. NEWTON, Seaton, Devon.

FORESTRY.

Prof. H. A. PRITCHARD, The Forestry Commission, 1, Whitehall, London, S.W.1.

Col. F. S. KENNEDY SHAW, C.B.E., Teffont Magna, Salisbury (Hunting Gates).

## PRIZE AWARDS, 1930.

\*\*\* An animal designated in this list as the "reserve number" is entitled *conditionally*, to succeed to any Prize that may become vacant in its class by reason of the animal placed above it by the Judges afterwards failing to qualify.

† Animals, where not otherwise stated, may be considered to have been bred by the Exhibitor.

ABBREVIATIONS EXPLAINED :—s., sire ; d., dam ; s.d., sire of dam ; y., year ; m., month ; w., week ; d., day ; R., Reserve ; V.H.C., Very Highly Commended ; H.C., Highly Commended ; C., Commended.

The Prizes in Classes 5, 26, 31, 63, 213, the Novice Prizes in the Devon Cattle Classes, and £148 towards the general Prizes were contributed by the Devon County Agricultural Association.

## HORSES.

### SHIRE.

(Registered or eligible for registration in the Shire Horse Society's Stud Book).

CLASS I.—*Shire Mare, in-foal, or with foal at foot.* [4 entries.]

I. (£10) and R. for Silver Medal\* and Challenge Vase†—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, black, **Fenny Misty Morn** (118173), foaled 1924, bred by G. Cotterill, Fenny Compton, Leamington ; s Marden Blend (36734), d Fenny Clansman's Girl (103071), s d Champions Clansman (29921) ; with foal.

II. (£5.) —WILLIAM J. LITTLETON, Helland Barton, Bodmin, bay, **Theale Crocus** (Vol. 45), foaled 1922, bred by H. E. Tucker, Steeple Ashton, Trowbridge ; s Ratcliff Matchless, d Semington Crocus, s d Saxton Draughtsman.

III. £3.)—F. W. PARSONS & SONS, Speckington, Ilchester, bay, **Speckington Clansmaid**, foaled 1926 ; s Tarnacre King's Lad (37887), d Wootton Manners 3rd (110718), s d Champions Clansman (29221) ; with foal by Speckington Brigadier.

\* Given by the Shire Horse Society. A Silver Medal (or the sum of £1) for the best Mare, Filly, or Filly Foal, registered or eligible for registration in the Stud Book under the conditions stated.

The Shire Horse Society also gave the sum of £1 to the breeder of the winner provided he was a Member of the Shire Horse Society and the dam of the winner was a mare registered in the Stud Book.

† "THE CITY OF BATH CHALLENGE VASE."

Presented by the Corporation of Bath (Cedric Chivers, Mayor, 1923), to be competed for annually and to be held by the winner for one year. For the best Shire Animal exhibited.

CLASS 2. *Shire Filly or Colt, foaled in 1929.* [3 entries.]

**I. £10.**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, bay filly, **Pendley Marceline**, bred by W. Newhouse, Ancliffe Hall, Slyne, Lancaster; s Darley Wild Wave (38149), d Ancliffe Winnie (106673), s d Warrior Carlton (31943).

**II. £5.**—F. W. PARSONS & SONS, Speckington, Ilchester, bay filly, **Speckington Pearl**; s Speckington Footprint (40166), d Stapleton Rose Marie (121357), s d Speckington Banker 2nd (39592).

**III. £3.** WILLIAM J. LITTLETON, Helland Barton, Bodmin, bay filly, **Brockhill Lady Friar**, bred by H. S. Thomas, Henwick Manor, Newbury; s Monks Green Friar, d Surbiton Starshot, s d Champions Goalkeeper.

CLASS 3. *Shire Filly, foaled in 1928.* [2 entries.]

**I. (£10), Silver Medal\* and Challenge Vase†**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, brown, **Llyncllys Lady Love** (123133), bred by R. W. Richards, Llyncllys, Oswestry; s Basildon Clansman (36277), d Llyncllys Queen (108829), s d Blaisdon Draughtsman (32113).

CLASS 4. *Shire Filly, foaled in 1927.* [1 entry.]

**I. (£10.)** Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, black, **Permanent Wave** (122363), bred by F. W. Whitehead, White Meadow Farm, Ashbourne; s Darley Wild Wave (38149), d Colney Black Bess (107544), s d Champion's Goalkeeper (30926).

CLASS 5. *Registered Shire Stallion, 3 years old or over, travelling in Devon on the property of a member of the Devon County Agricultural Association.* [6 entries.]

**I. (£8.)** F. W. PARSONS & SONS, Speckington, Ilchester, bay, **Speckington Brigadier**, foaled 1925; s Theale Lockfast (37890), d Speckington Nobility (10574), s d Speckington Coming King (35211).

**II. (£5.)** S. WEBBER, Hill Farm, Tiverton, Devon, black, **Platinum 3rd** (39953), foaled 1924, bred by W. W. Robinson, Hollins Farm, Holme, Carnforth; s Burscough Blend (37191), d Marsden Jess (99153), s d Rowington Salt King (31787).

**III. (£3.)** WILLIAM JAMES SQUIRE, Hole Stud Farm, Ermington, S.O., South Devon, black, **Dripsell Ace of Trumps** (40268), foaled 1926, bred by H. C. Bladder, Fowler's Farm, Malvern; s Ouse Bridge Hector (39291), d Whitakers Forest Princess (96338), s d Tandridge Forest King (27841).

**R.** S. WEBBER, Hill Farm, Tiverton, Devon; s Sundridge Coming King, d Model, s d King Cole.

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\* Given by the Shire Horse Society. A Silver Medal (or the sum of £1) for the best Mare, Filly, or Filly Foal, registered or eligible for registration in the Stud Book under the conditions stated.

The Shire Horse Society also gave the sum of £1 to the breeder of the winner provided he was a Member of the Shire Horse Society and the dam of the winner was a mare registered in the Stud Book.

† "THE CITY OF BATH CHALLENGE VASE."

Presented by the Corporation of Bath (Cedric Chivers, Mayor, 1923), to be competed for annually and to be held by the winner for one year. For the best Shire Animal exhibited.

## HUNTERS.

CLASS 6.—*Hunter Mare, in-foal, or with foal at foot.* [9 entries.]

**I. (£15)** and Medal\*—THE LITTLE LYNDRIDGE STUD (Mrs. Vinson-Thomas), Okehampton, Devon; with foal by Pytchley.

**II. £10.**—Major A. C. ARDEN, Higher Stiniei, Chagford, brown, **Nine Pounds** (H.S.B. Vol. 12, 6870), foaled 1918, bred by Mrs. Fox, Puttendon Manor, Tonbridge; s Hanover Square, d Patches, s d Servitor; with foal by Scarlet Rambler.

**III. (£3.)**—LORD DIGBY, Minterne, Dorchester, bay, **Lady Mary 6th** (7332), foaled 1920; s Gay Lally; with foal by Brigand.

**R.** for Medal\*—The COUNTESS OF MOUNT EDGCUMBE, Mount Edgcumbe, Plymouth, brown, **Curiosity 2nd**, foaled 1922, bred by Mr. Meischke Smith, Hampshire; s Gay Lally, d Curia, s d Curio; in foal to Scarlet Rambler.

CLASS 7.—*Hunter Colt or Filly Foal, produce of Mare in Class 6.* [6 entries.]

**I. (£5.)**—THE LITTLE LYNDRIDGE STUD (Mrs. Vinson-Thomas), Okehampton, Devon.

**II. (£3.)**—H. S. ROBSON SCOTT, Hightown Hill, Ringwood, Hants.

**R.**—LORD DIGBY, Minterne, Dorchester.

CLASS 8.—*Hunter Filly, Colt or Gelding, foaled in 1929.* [11 entries.]

**I. (£10.)**—CHARLES LASCELLES HANCOCK, The Farm Cottage, Cothelstone, Taunton, dark bay gelding, **Friar's Balsam**, bred by Mrs. Turner, Wheddon Cross, Dunster; s Friar.

**II. (£5.)**—H. S. ROBSON SCOTT, Hightown Hill, Ringwood, Hants, bay colt, **lolair**; s Eaglehawk (G.S.B.), d Gay Nun (H.I.S.B. 6385), s d Peter the Hermit.

**III. (£3.)**—WILLIAM PEARCE, South Heasley, North Molton, N. Devon, brown filly, **Dinah 6th** (H.S.B. Vol. 12, 7307); s Brigand, d Dinah 5th (H.S.B. Vol. 12, 7306).

**R.**—LORD DIGBY, Minterne, Dorchester, black filly, **Kittywinks** (7331), s Kingsborough, d Kitty 21st (7114).

\* Given by the Hunters' Improvement and National Light Horse Breeding Society. Gold Medal or Bronze Medal and £5, for the best Hunter Brood Mare under the conditions stated.

CLASS 9.—*Hunter Filly, Colt or Gelding, foaled in 1928. [11 entries.]*

**I. (£10.)**—MISS V. WELLESLEY, Ford House, Churchinford, near Chard, chestnut filly, **Juliet 4th** (7209), bred by A. Terry, Quarrondon House, Aylesbury, Bucks; s Kingsborough, d Stella 19th (7204), s d Sundown.

**II. (£5.)**—COLDBROOK ESTATES LTD. (Major J. A. Herbert), Coldbrook, Abergavenny, chestnut filly, bred by Mr. J. G. Lynch, Knocklong Stud, Ireland; s Denis d'Or, d Tullyleake, s d Marten.

**III. (£3.)**—WILLIAM JAMES LYSLEY, Castle Combe Stud, Chippenham, brown filly, **Mary Makebelieve**; s Maitre Corbeau, d Sweet Pepper 2nd, s d Brandimintine.

**R.**—SIR HENRY H. A. HOARE, Bart., Stourhead, Zeals, S.O., Wilts, chestnut gelding, **Dorset** (H.I.S. 1278); s Loughton's Last, d Lady Dorchester (H.I.S. 6697), s d Barbed Fence.

CLASS 10.—*Hunter Filly or Gelding, foaled in 1927. [10 entries.]*

**I. (£10.)** Captain J. H. MARSHALL, Maiden Newton, Dorchester, chestnut gelding, **Quarter Day**, bred by Mr. Alder, Hargrave, Stansted, Essex; s Limosin, d Daisy (G.S.B.), s d Merry Matchmaker.

**II. (£5.)** SIR HENRY H. A. HOARE, Bart., Stourhead, Zeals, S.O., Wilts, bay gelding, **Tidal** (H.I.S. 1040); s Tidal Wave, d Lady Dorchester (6697), s d Barbed Fence.

**III. (£3.)** COLD BROOK ESTATES LTD. (Major J. A. Herbert), Coldbrook, Abergavenny, chestnut filly, **Garnet** (7183); s Clarendon, d Gem, s d St. Adrian.

**R.**—CAPTAIN R. DE WARRENNE ROGERS, D.S.O., Great Farmcote, near Winchcombe, Glos., chestnut filly, **Princess Caprice**, bred by S. T. Holland, The Barn House, Bibury, Cirencester, Glos.; s Prince Hermes, d South Cape, s d Grosvenor.

**H.C.**—THE COUNTESS OF MOUNT EDGEUMBE, Mount Edgecumbe, Plymouth, chestnut mare, **Clovelly**, bred by Mr. Hammond, Risdon, Bratton, Clovelly; s Jingling Geordie, d Mare, s d Longboat.

PRODUCE GROUP CLASS.

The Hunters' Improvement and National Light Horse Breeding Society offered Three Premiums of £1 to be awarded to the owners of a Group of Three Young Hunters (not exceeding 3 years old), by the same Thoroughbred or Registered Hunter sire and entered in Classes 8, 9 or 10, provided that not less than Two Groups competed, and that the animals in the selected group were tendered for registration in the Hunter Stud Book. If six or more groups competed, the offer was increased to Three Premiums of £2 each, for the best Group, and Three Premiums of £1 each for the second best Group, and similar Premiums were also offered by the Society.

(INSUFFICIENT ENTRIES.)



## ARABS AND PONIES.

### ARAB.

Animals entered in Class 11 must have been registered or accepted for registration in the Arab Horse Stud Book.

(£25 towards the Prizes in this Class were given by the Arab Horse Society).

**CLASS 11.**—*Arab Colt, Filly or Gelding, foaled in 1927, 1928 or 1929.*  
[7 entries.]

**I. (£15)** and Silver Medal\*—H.R.H. THE PRINCE OF WALES, K.G., St. James's Palace, S.W., chestnut colt, **Algol**, foaled 1928; s Aldebaran, d Rangha, s d Berk.

**II. £12.**—C. W. HOUGH, Hydes, Abridge, Essex, chestnut colt, **Barkis**, foaled 1929, bred by H.R.H. The Prince of Wales, K.G., Duchy of Cornwall Stud, Princetown, Devon: s Aldebaran, d Rangha, s d Dwarka.

**III. (£8.)**—Mrs. H. V. MUSGRAVE CLARK, Iford, near Lewes, Sussex, bay colt, **Shem**, foaled 1927; s Atesh, d Safarjal, s d Berk.

**V.H.C.**—Colonel J. HAMILTON LEIGH, Bindon House, Wellington, Somerset, grey colt, **Fadlalla**, foaled 1927; s Iram (late Feith Dhomnuil), d Rayya, s d Rustem.

### POLO AND RIDING PONY.

Animals entered in Classes 12 to 15 must have been entered in the National Pony Stud Book or registered in the approved Mare Register.

(£5 towards the Prizes in these Classes were given by J. V. Rank, Esq.).

**CLASS 12.**—*Polo and Riding Mare, not exceeding 15 hands, in foal or with foal at foot.* [4 entries.]

**I. (£10)**, Silver Medal\*\* and Bronze Medal†—Mrs. J. OSCAR MUNTZ, Foxhams, Harrabridge, S. Devon, bay, **Early Market**, foaled 1921, bred by H. Spry, Witherdon, N. Devon; s Yorkshire Hussar, d Market Girl, s d Springall; with foal by Love Song.

**II. (£5)** and R for Silver Medal\*\*—Capt. The Hon. C. K. Greenway, Stanbridge Earls, Romsey, Hants, bay, **Raheene**, foaled 1923, bred in Ireland; s Raheene, d A Flapper, s d Agadir; with foal by Malice.

**III. (£3)** and R for Bronze Medal†—Miss JOAN HAMLYN, Hapstead, Buckfastleigh, bay, **Rainbow 2nd**, foaled 1917, bred by Miss Allen, Modbury; d Fly-away; with foal by Scarlet Rambler.

\* Silver Medal given by the Arab Horse Society for the Best Colt in Class 11.

GIVEN BY THE NATIONAL PONY SOCIETY.

\*\* Silver Medal for the Best Brood Mare in Class 12.

† Bronze Medal for Best Foal.

CLASS 13.—*Polo and Riding Pony Filly, Colt or Gelding, foaled in 1929.* [5 entries.]

**I. (£10.)**—Lady HUNLOCKE, Cowbridge, Malmesbury, bay colt, **Wingerworth Jade**; s Wild Tint (1207), d Syllabub (P.P.S.B. 5737), s d Barbed Fence.

**II. (£5.)**—Capt. The Hon. C. K. GREENWAY, Stanbridge Earls, Romsey, Hants, bay filly, **Malyston**; s Malice (G.S.B. Vol. XXVI, Page 1335), d Lady Jane (Vol. XIX N. Polo 5418), s d Royston Cave (421).

**III. (£3.)**—Capt. The Hon. C. K. Greenway, bay colt, **Malally**; s Malice (G.S.B. Vol. XXVI, Page 1335), d Janet 6th (A.M.R. 195), s d Gay Lally (Vol. XXII, Page 306).

**R.**—Mrs. J. OSCAR MUNTZ, Foxhams, Horrabridge, S. Devon, chestnut filly, **New Fashioned**, bred by C. Reynolds, Bowden, Lanes.; s Tabarin, d New Love, s d Arthur's Pride.

**H.C.**—LORD DIGBY, Minterne, Dorchester, chestnut filly, **Precious Bane**, s Friarsgate (1325), d Precioso (Approved Mare Register, Page 270).

CLASS 14.—*Polo and Riding Pony Filly, Colt or Gelding, foaled in 1928.* [8 entries.]

**I. (£10)** and **R for Silver Medal†**—Capt. The Hon. C. K. GREENWAY, Stanbridge Earls, Romsey, Hants, bay filly, **Malanet**; s Malice (G.S.B. Vol. XXVI, Page 1335), d Janet 6th (A.M.R., Page 195), s d Gay Lally (Vol. XXII, Page 306).

**II. (£5.)**—LORD DIGBY, Minterne, Dorchester, chestnut colt, **Firefly 3rd**; s Friarsgate (1325), d Precioso (A.M.R., Page 270).

**III. (£3.)**—LORD DIGBY, chestnut filly, **Friarsgown**; s Friarsgate (1325), d Nightgown.

**R.**—Mrs. M. M. FITZGERALD, Marsden Manor, Cirencester, Glos., bay gelding, **Bird Cherry**; s Cherry Tint (761), d Black Bess 19th (A.P.M.R., Page 107).

**H.C.**—Mrs. J. OSCAR MUNTZ, Foxhams, Horrabridge, S. Devon, brown filly, **Call of the Wild**; s Love Song, d Bush Girl, s d The Squire.

CLASS 15.—*Polo and Riding Pony Filly, Colt or Gelding, foaled in 1927.* [9 entries.]

**I. (£10)** and **Silver Medal†**—Lady HUNLOCKE, Cowbridge, Malmesbury, chestnut gelding, **Wingerworth Tatters** (Supp. 1928); s Ragged Robin (G.C.B.), d Syllabub (5737), s d Barbed Fence.

**II. (£5.)**—Mrs. J. OSCAR MUNTZ, Foxhams, Horrabridge, Devon, black filly, **Kirsche**, bred by C. Drielsma, Great Bidlake, Bridestowe, Devon; s Sentry, d Cherrimoy, s d December.

**III. (£3.)**—THE COUNTSSE OF MOUNT EDGCOMBE, Mount Edgcombe, chestnut gelding, **Clipper**; s Longboat, d Stella Maris 2nd, s d Suspiro.

**R.**—THE LITTLE LYNDRIDGE STUD (Mrs. Vinson-Thomas), Okehampton, Devon, brown filly, **Lyndridge lady Erin**; s Lord Hilary, d Lyndridge Shamrock (A.M.R., 274).

**H.C.**—HERBERT WHITLEY, Primley, Paignton, Devon, chestnut colt, **Primley Toreador**; s Good Form, d Primley Fifinella, s d Golden Grebe.

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GIVEN BY THE NATIONAL PONY SOCIETY.

† Silver Medal for Best Exhibit in Class 13, 14 or 15.

*Prizes awarded to Shetland and Dartmoor Ponies.*

**SHETLAND PONY.**

CLASS 16.—*Shetland Pony Mare, not exceeding 10.2 hands, in foal, or with foal at foot.* [2 entries.]

**I. (£10.)**—Mrs. BETTY COX, Marshwood Manor, Bridport, Dorset, black, **Maid of Urr**, foaled 1917, bred by F. N. M. Gourlay, Kirkland, Tynson, Thornhill, Dumfriesshire; s Drumlanrig (699), d Delia (2327), s d Thor (83); with foal by Perseus of Transy.

**II. (£5.)**—Lady HUNLOKE, Cowbridge, Malmesbury, skewbald, **Wingerworth Flapper**; s Bright Boy of Earlsall, d Rossina, s d Thor; in foal.

CLASS 17.—*Shetland Pony Stallion, not exceeding 10.2 hands, foaled in or before 1927.* [3 entries.]

**I. (£10.)**—Mrs. BETTY COX, Marshwood Manor, Bridport, Dorset, black, **Venture of Marshwood** (1236), foaled 1925; s Bohemian of Earlsall (1079), d Verona of Maryfield (3405), s d Erling (448).

**II. (£5.)**—Misses CALMADY HAMLYN & DAWSON, Pearroc Vean, Buckfast, piebald, **Jack 2nd of Blackcombe**, foaled 1921, bred by A. Fox Brockbank, The Croft, Kirk Santon, Cumberland; s Cafe Creme, d Dame of Earlsall, s d Borderer of Earlsall.

**III. (£3.)**—Misses CALMADY HAMLYN & DAWSON, black, **Brambles**, foaled 1926, bred by Lady Hunloke, Cowbridge, Malmesbury; s Dibblitz of Penniwells, d Rosina, s d Thorrau.

**DARTMOOR.**

CLASS 18.—*Dartmoor Mare, not exceeding 12.2 hands, in foal or with foal at foot.* [5 entries.]

**I. (£5.)**—Misses CALMADY HAMLYN & DAWSON, Pearroc Vean, Buckfast, brown; with foal.

**II. (£3.)**—THE LITTLE LYNDRIDGE STUD (Mrs. Vinson-Thomas), Okehampton, Devon, light bay, **Lyndridge Sally**, foaled 1920, bred by H. Ewens, Pothonger, Okehampton; with foal by His Knibbs of Lyndridge.

**III. (£2.)**—Mrs. J. OSCAR MUNTZ, Foxhams, Horrabridge, S. Devon, grey, **Blue Fairy**, foaled 1926; d Fairyland, s d The Mikado; with foal by Love Song.

**R.**—THE COUNTESS OF MOUNT EDGCUMBE, Mount Edgecumbe, Plymouth, grey, **Seagull 2nd**, foaled 1923, bred by Mr. Rowe, Frenchbeer Farm, Chagford; with foal by Royal Shales.

CLASS 19.—*Dartmoor Colt or Filly, 1 year old, or Gelding or Filly, 2 years old.* [3 entries.]

**I. (£5.)**—THE LITTLE LYNDRIDGE STUD (Mrs. Vinson-Thomas), Okehampton, Devon, bay colt, **Lyndridge Mischief**, foaled 1929; s His Knibbs of Lyndridge (1310), d Lyndridge Moorhen (5441).

**II. (£3.)**—R. J. HARD, Moorcross, Cornwood, near Ivybridge, Devon, brown filly, **Lassie**, foaled 1929; s Nipper, d Queenie.

**R.**—Misses CALMADY HAMLYN & DAWSON, Pearroc Vean, Buckfast, black filly, **Janetta 2nd**, foaled 1929; s Jolly Jankin, d Water Wagtail, s d The Leat.

**CLASS 20.** *Dartmoor Stallion, not exceeding 12.3 hands.* [4 entries.]

**I. (£5.)**—THE LITTLE LYNDRIDGE STUD (Mrs. Vinson-Thomas), Okehampton, Devon, bay, **His Knibbs of Lyndridge**, foaled 1921, bred by A. Hodge, Higher Halstock Farm, Okehampton.

**II. (£3.)** Misses CALMADY HAMLYN & DAWSON, Pearroc Vean, Buckfast, black, **Jolly Jankin**, foaled 1922, bred by M. Mortimer, Chagford.

**III. (£2.)** S. HORRELL, Bucktor, Yelverton, Devon, bay, **Moorman**, foaled 1924.

**R.** R. J. HARD, Moorcross, Cornwood, near Ivybridge, Devon, bay, **Bath Boy**, foaled 1927; s Beacon Hero, d Queenie, s d Dartmoor Pony.

## RIDING CLASSES.

### HUNTER.

**CLASS 21.** *Hunter Mare or Gelding, foaled before 1927, that had not won a prize of £10 or over under saddle at any Show held previous to April 1, 1930.* [29 entries.]

**I. (£10.)** J. KENNETH STEVENSON, The Chase, Welland, Malvern, Wores., bay gelding, **Bayleaf**, foaled 1924; s Burgoman.

**II. (£5.)** Captain J. A. HERBERT, R.H.G., Coldbrook Park, Abergavenny, bay gelding, **Amber 2nd**, foaled 1926; s Monkey Tricks, d Justice (S.B. 6723), s d Just Cause.

**III. (£3.)** ARTHUR BRAKE, Higher Farm, Limington, Yeovil, brown gelding, **Rossiter**, foaled 1925, bred by John Rossiter, Wexford; s Gold Stream, d Fraulin, s d Fitz Gibbon.

**R.** Miss BUSFIELD, Chipping Sodbury, chestnut gelding, **Ben Hur**, foaled 1922, bred by Capt. Paget, Middlethorpe Hall, Yorks; s Santoinia, s d Condamore.

**H.C.**—ERNEST PAUL ADAMS, Clifton Gardens, Truro, chestnut gelding, **Fleetwing**, foaled 1925; s Hunty Gowk, d Countess 8th.

**H.C.**—FRANCIS WILLIAM CONGDON, West Whiteleigh, Crownhill, near Plymouth, brown gelding, **Baronet**, foaled 1925, bred by C. Hancock, The Manor House, Cothelstone, Taunton; s Gilgandra.

**H.C.**—LORD MILDMAY OF FLETE, Flete Ermington, S. Devon, dark bay gelding, **Gamester**, foaled 1924; s Gamefeather.

**C.**—GEO. W. NICHOLLS, 13, Meneage Street, Helston, chestnut mare, **Flora 3rd** (6632), foaled 1925; s Hunty Gowk, s d Fasbrony (6631).

**CLASS 22.** *Hunter Mare or Gelding, foaled in 1926.* [10 entries.]

**I. (£10.)**—Capt. J. A. HERBERT, R.H.G., Coldbrook Park, Abergavenny, bay gelding, **Amber 2nd**, foaled 1926; s Monkey Tricks, d Justice (S.B. 6723), s d Just Cause.

**II. (£5.)**—ALFRED JAMES, Totterdown, Bristol, gelding, **Park-keeper**; s Hopeful Bachelor.

**III. (£3.)**—ARTHUR L. PALMER, Bown Hinton, Martock, bay gelding, **Nomination**, foaled 1926.

**R.** THE LITTLE LYNDRIDGE STUD (Mrs. Vinson-Thomas), Okehampton, Devon, brown gelding, **Dispute**, foaled 1926, bred by Mr. Swenfer, The Chestnuts, Clipston, Market Harborough : s Pytchley, d Ethel, s d Ethelbruce.

CLASS 23.—*Hunter Mare or Gelding, foaled before 1927 and not more than 8 years old, to carry not more than 12 stone 7lbs.* [11 entries.]

**I. (£20).**—Capt. J. A. HERBERT, R.H.G., Coldbrook Park, Abergavenny, bay gelding, **Amber 2nd**, foaled 1926 : s Monkey Tricks, d Justice (S.B. 6723), s d Just Cause.

**II. £10.**—Miss BUSFIELD, Chipping Sodbury, chestnut gelding, **Ben Hur**, foaled 1922, bred by Capt. Paget, Middlethorpe Hall, Yorks ; s Santoinia, s d Condamore.

**III. (£3).**—ERNEST PAUL ADAMS, Clifton Gardens, Truro, chestnut gelding, **Fleetwing**, foaled 1925 ; s Hunty Gowk, d Countess 8th.

**R.**—ALFRED JAMES, Totterdown, Bristol, gelding, **The Charm**, foaled 1924 ; s Sandstone.

**H.C.**—GEO. W. NICHOLLS, 13, Meneage Street, Helston, chestnut mare, **Flora 3rd** (6632), foaled 1925 ; s Hunty Gowk, s d Fasbrony (6631).

CLASS 24.—*Hunter Mare or Gelding, foaled before 1927 and not more than 8 years old, to carry over 12 stone 7lbs., and under 14 stone.* [16 entries.]

**I. (£20).**—The Hon. DOROTHY PAGET, 8, Balfour Place, Park Lane, London, W., chestnut gelding, **Red Rufus**, foaled 1924, bred by Mrs. J. L. Jones, Treworgan Court, Ross, Herefordshire ; s Bachelors Image, d Betty 4th, s d Red Sahib.

**II. (£10).**—Miss DIANA RUSSELL-ALLEN, Davenham Hall, Northwich, bay gelding, **Trespasser**, foaled 1924, bred by Mr. Ryan, Naas, Co. Kildare, Ireland ; s Jabberwock, s d Grebe.

**III. (£3).**—ARTHUR BRAKE, Higher Farm, Limington, Yeovil, brown gelding, **Rossiter**, foaled 1925, bred by John Rossiter, Wexford ; s Gold Stream, d Fraulin, s d Fitz Gibbon.

**R.**—LORD MILDMAY OF FLETE, Flete Ermington, S. Devon, dark bay gelding, **Gamester**, foaled 1924 ; s Gamefeather.

CLASS 25.—*Hunter Mare or Gelding, foaled before 1927 and not more than 8 years old, to carry 14 stone or over.* [12 entries.]

**I. (£20) and R for Silver Medal\*.**—J. KENNETH STEVENSON, The Chase, Welland, Malvern, Worcs., brown gelding, **Luxury**, foaled 1922 ; s Sir Rowland.

**II. (£10) and Silver Medal\*.**—Mrs. JAS. POOLEY, Gwinear, Hayle, Cornwall, brown gelding, **Eclipse**, foaled 1924 ; s Agadir.

**III. (£3).**—J. KENNETH STEVENSON, The Chase, Welland, Malvern, Worcs., bay gelding, **Bayleaf**, foaled 1924 ; s Burgoman.

**R.**—Miss DIANA RUSSELL-ALLEN, Davenham Hall, Northwich, Cheshire, bay gelding, **Swallow**, foaled 1925 ; bred by Major A. S. Cooper, Killemore Castle, Dundrum ; s Sir Rowland.

\* Given by the Hunters' Improvement and National Light Horse Breeding Society. A Silver Medal, or the sum of £1, for the best Hunter Mare or Gelding of any age exhibited in the Saddle Classes (the property of a Member of the Hunters' Improvement and National Light Horse Breeding Society) under the conditions stated.

CLASS 26.—*Hunter Mare or Gelding not exceeding 6 years old (4 years old and over to be ridden), the property of a bona-fide Farmer in the County of Devon.* [3 entries.]

I. (£8).—WILLIAM YEO, Belladown, Newton Tracey, Barnstaple, Devon, brown gelding, **Barnstep**, foaled 1925; s Bryan.

II. (£4).—FRANCIS WILLIAM CONGDON, West Whiteleigh, Crownhill, near Plymouth, brown gelding, **Baronet**, foaled 1925, bred by C. Hancock, The Manor House, Cothelstone, Taunton; s Gilgandra.

### HACK AND RIDING PONY.

CLASS 27.—(*Novice Class*). *Hack Mare or Gelding, any height, that had not won a prize of over £5 in value as a Hack at any Show held previous to April 1st, 1930, ridden on the first day of the Show.* [20 entries.]

I. (£10).—Major R. M. STEWART RICHARDSON, Idoover House, Dauntsey, chestnut gelding, **Battle Royal**.

II. (£5).—J. V. RANK, Ouborough, Godstone, Surrey, chestnut gelding, **Royal Irish**.

III. (£2).—Mrs. J. OSCAR MUNTZ, Foxhams, Horrabridge, S. Devon, chestnut mare, **Stolen Love**.

R.—Mrs. J. OSCAR MUNTZ, Foxhams, Horrabridge, S. Devon, chestnut mare, **Easter Bonnie**.

H.C.—Mrs. PHILIP FLEMING, Grendon Hall, Grendon Underwood, Bucks, grey mare, **Snowdrop**.

C.—A. R. KENT, Upper Fulbrook, Stratford-on-Avon, brown mare, **Tiara**.

CLASS 28.—*Hack Mare or Gelding, any height, ridden on the 2nd day of the Show.* [11 entries.]

I. (£10).—Major R. M. STEWART RICHARDSON, Dauntsey, Chippenham, chestnut gelding, **Battle Royal**.

II. (£5).—J. V. RANK, Godstone, Surrey, chestnut gelding, **Royal Irish**.

III. (£2).—J. K. STEVENSON, Malvern, Worcs., bay mare, **Mignonette**.

R.—Mrs. J. O. MUNTZ, Foxhams, Horrabridge, chestnut mare, **Stolen Love**.

H.C.—Mrs. J. O. MUNTZ, Foxhams, Horrabridge, chestnut mare, **Easter Bonnie**.

C.—A. R. KENT, Stratford-on-Avon, brown mare, **Tiara**.

CLASS 29.—*Hack Mare or Gelding, 15 hands and over, ridden Side Saddle and judged by a lady on the 2nd day of the Show.* [12 entries.]

I. (£10).—Major R. M. STEWART RICHARDSON, Dauntsey, chestnut gelding, **Battle Royal**.

II. (£5).—J. V. RANK, Godstone, chestnut gelding, **Royal Irish**.

III. (£2).—J. K. STEVENSON, Malvern, bay mare, **Mignonette**.

R.—Mrs. P. FLEMING, Grendon Underwood, grey mare, **Snowdrop**.

H.C.—Mrs. J. O. MUNTZ, Horrabridge, chestnut mare, **Stolen Love**.

xiv *Prizes awarded to Hacks and Riding and Children's Ponies.*

CLASS 30.—*Hack Mare or Gelding, under 15 hands, ridden on the 3rd day of the Show.* [14 entries.]

I. (£10.)—Mrs. P. FLEMING, Grendon Underwood, grey mare, **Pegity**.

II. (£5.)—Mrs. S. PETCH, Milborne Port, **Landrail**.

III. (£2.)—Miss O. RICKS, Hatch Farm House, Addlestone, chestnut mare, **Golden Image**.

R.—Capt. J. GOULDSMITH, Dartington, Totnes, chestnut gelding.

H.C.—Capt. J. H. MARSHALL, Maiden Newton, chestnut mare, **Davina**.

CLASS 31.—*Weight-carrying Cob, not exceeding 15.1 hands, to carry not less than 14 stone, ridden on the 3rd day of the Show.* [10 entries.]

I. (£10.)—Major R. M. STEWART RICHARDSON, Dauntsey, chestnut gelding, **Sandy S**.

II. (£5.)—Capt. L. N. MASTERS, Royal Automobile Club, London, chestnut gelding, **Safety**.

III. (£2.)—LITTLE LYNDRIDGE STUD, Okehampton, chestnut gelding, **Lyndridge Chance**.

R.—Miss J. L. CAVE PENNY, Poundsgate, S. Devon, bay mare, **Vanity Fair**.

H.C.—Mrs. JAS. POOLEY, Gwinear, Hayle, Cornwall, chestnut gelding, **Nero**.

### CHILDREN'S PONY.

Small Silver Cups were presented to the best Boy and best Girl Riders in these Classes.

CLASS 32.—*Pony, not over 13 hands, suitable for and ridden by a child not over 10 years of age last birthday, on the 3rd day of the Show* [10 entries.]

I. (£5) and Silver Cup.—E. HOUSE, Weston-super-Mare, chestnut, **Cupid**.

II. (£4.)—ROY BRAKE, Higher Farm, Limington, Yeovil, grey mare, **Dorcas**.

III. (£2.)—Misses TILLEY, Rudloe, Box, Wilts.

IV. (£1.)—Mrs. E. D. HOCKLEY, Place, Ashburton, liver chestnut mare, **Russell 2nd**.

R. and Silver Cup.—Mrs. P. CAREW, Chubator, Yelverton, grey mare, **Mistral**.

H.C.—Air Commodore P. SMYTH OSBOURNE, C.M.G., Holnedown, Exbourne, N. Devon, bay mare, **Pixie**.—T. A. CODNER (for Miss Primrose Codner), The Manor House, Edginswell, Devon, chestnut mare, **Amber**.—Mrs. P. CAREW Chubator, Yelverton, chestnut gelding, **Redwing**.

C.—THE LITTLE LYNDRIDGE STUD, Okehampton, shewbald mare, **Tiddley Winks**.—E. SOUTHWOOD, Brailsfield Mews, Torquay, brown gelding, **Peter Pan**.

CLASS 33.—*Pony, not over 14 hands, suitable for and ridden by a child over 10 and not over 14 years of age last birthday, on the 4th day of the Show.* [18 entries.]

I. (£5) and Silver Cup.—Miss JILL HERMON-ERRIMAN, The White Cottage, Folkestone, Kent, grey gelding, **Starlights**.

**II. (£4.)**—Miss O. RICKS, Addlestone, chestnut gelding, **Cators Beam**.

**III. (£2.)**—THE LITTLE LYNDRIDGE STUD, Okehampton, bay mare, **Lyndridge Belle**.

**III. (£2).**—Misses TILLEY, Rudloe House, Box, Wilts.

**R.**—THE LITTLE LYNDRIDGE STUD, Okehampton, bay gelding, **Lyndridge Johnny**.

**V.H.C.**—Miss VICTORIA WESTON-STEVENS, Woolley Cottage, The Thicket, Maidenhead, grey mare, **Quicksilver**.—Miss E. LAMBERT, Marsh Court, Sherborne, chestnut mare, **Moss Rose**.—Miss D. HOUSE, Weston-super-Mare, black mare, **Nannette**.

**H.C.**—Miss D. M. MALLINS, Brock Park, Chagford, Devon, chestnut mare, **Vedette**.

**Silver Cup.**—The COUNTESS OF MOUNT EDGEUMBE, Mount Edgecumbe, Plymouth.

## DRIVING CLASSES.

**CLASS 34.**—(*Novice Class*). *Stallion, Mare or Gelding, not over 14 hands, that had not previously won a prize of over £5 in value in Single Harness at any Show held previous to January 1, 1930, driven on the 2nd day of the Show.* [3 entries.]

**I. (£10.)**—A. HARGREAVES, Belsize Grange, Chertsey, bay gelding, **Belsize Marizon**.

**II. (£5.)**—FRANK C. MINOPRIO, Avening Court, Glos., bay gelding, **Mickey Mouse** (late **Wensleydale Autocrat** 14660).

**III. (£3.)**—Mrs. KING, Braishfield Manor, Romsey, brown gelding, **Braishfield Hereward**.

**CLASS 35.**—(*Novice Class*). *Stallion, Mare or Gelding, over 14 and not over 15 hands, that had not previously won a prize of over £5 in value in Single Harness at any Show held previous to January 1, 1930, driven on the 2nd day of the Show.* [2 entries.]

**I. (£10.)**—H. J. COLEBROOK, Fulmer, Bucks.

**II. (£5.)**—FRANK C. MINOPRIO, Avening Court, Avening, Glos., bay mare, **Electric Belle**.

**CLASS 36.**—(*Novice Class*). *Stallion, Mare or Gelding over 15 hands that had not previously won a prize of over £5 in value in Single Harness at any Show held previous to January 1, 1930, driven on the 2nd day of the Show.* [2 entries.]

**I. (£10.)**—H. J. Colebrook, Fulmer, Bucks.

**II. (£5.)**—FRANK C. MINOPRIO, Avening Court, Avening, Glos., dark chestnut gelding, **Amberley Blue Boy**.



CLASS 37.—*Pair of Mares or Geldings, any height, driven in Double Harness on the 3rd day of the Show.* [3 entries.]

I. (£15.)—H. J. COLEBROOK, Fulmer, Bucks.

II. (£7.)—Mrs. KING, Braishfield Manor, Romsey, brown geldings, **Ringer** and **Raider**, foaled 1922.

III. (£3.)—FRANK C. MINOPRIO, Avening Court, Avening, Glos., dark chestnut gelding, **Amberley Blue Boy**, and dark chestnut mare, **Nottingham Princess**;

CLASS 38.—*Tandems, Mares or Geldings, any height, driven on the 3rd day of the Show.* [3 entries.]

I. (£15.)—H. J. COLEBROOK, Fulmer, Bucks.

II. (£7.)—Mrs. KING, Braishfield Manor, Romsey, brown geldings, **Ringer** and **Raider**.

III. (£3.)—F. C. MINOPRIO, Avening, dark chestnut gelding, **Amberley Blue Boy**, and dark chestnut mare, **Nottingham Princess**.

CLASS 39.—*Stallion, Mare or Gelding, not exceeding 14 hands, driven on the 4th day of the Show.* [5 entries.]

I. (£15.)—D. R. BLAIR, Furnivalls, Amersham, Bucks, dark brown stallion, **Bricket Fusiller** (13509).

II. (£7.)—F. C. MINOPRIO, Avening, bay gelding, **Mickey Mouse**.

III. (£3.)—A. HARGREAVES, Belsize, Chertsey, bay gelding, **Belsize Marlzon**.

R.—Miss KATHLEEN M. HASSARD, Lotus Land, Horeham Road, E. Sussex, bay gelding, **Naughty Spark**.

CLASS 40.—*Stallion, Mare or Gelding, over 14 and not exceeding 15 hands, driven on the 4th day of the Show.* [6 entries.]

I. (£15.)—D. R. BLAIR, Amersham, bay gelding, **Powder Monkey** (G548).

II. (£7.)—Mrs. KING, Braishfield, Romsey, brown gelding, **Raider**.

III. (£3) and Silver Medal\*—Miss KATHLEEN M. HASSARD, Lotus Land, Horeham Road, E. Sussex, chestnut mare, **Sussex Gorse**.

IV. (£2.)—H. J. COLEBROOK, Fulmer, Bucks.

R.—Mrs. W. HARDING, Brislington, Bristol, bay gelding, **Leading Article**.

CLASS 41.—*Stallion, Mare or Gelding, over 15 hands, driven on the 4th day of the Show.* [2 entries.]

I. (£15.)—F. C. MINOPRIO, Avening, **Nottingham Princess**.

II. (£7) and Silver Medal†.—H. J. COLEBROOK, Fulmer, Bucks.

GIVEN BY THE HACKNEY HORSE SOCIETY.

\* A Silver Medal for the Best Mare or Horse in Classes 34 to 36.

† ditto for the best Mare or Horse in Classes 39 to 41.

## JUMPING.

(Under Show Jumping Association Rules).

CLASS 42.—(*Novice Class*). *Mare or Gelding, any height, not having previously won a prize of £5 or over for Jumping at any Show up to the time of Judging, jumping over the course in the best form on the 1st day of the Show.* [10 entries.]

I. (£10.)—E. G. DORSE, Boxenhedge House, Trull, Taunton, **Canopeum**.

II. (£7.)—Ditto, ditto, **John Peel**.

III. (£5.)—Hon. D. PAGET, Hyde Park, London, **Bridget**.

CLASS 43.—*Mare or Gelding, over 15 hands, jumping over the course in the best form on the 2nd day of the Show.* [21 entries.]

I. (£15.)—MORGAN BROS., Henlade House, Taunton, **Robert**.

II. (£7.)—J. TAYLOR, Stretton, Warrington, brown mare, **Gem**.

III. (£5.)—A. BRAKE, Limington, Yeovil, brown mare, **Belinda**.

**Equal IV. (13s. 4d.)**—T. GLENCROSS, Seagry, Chippenham, **Peter Pan**, Miss M. A. BULLOWS, Edgbaston Riding School, **Toby**, and J. C. BOWDEN, Woodside, Whimble, brown mare, **Fearless**.

CLASS 44.—*Mare or Gelding, 15 hands and under, jumping over the course in the best form on the 2nd day of the Show.* [11 entries.]

**Equal I. (£9.)**—T. GLENCROSS, Seagry, Chippenham, **Cigarette**, Miss M. A. BULLOWS, Edgbaston Riding School, **If Not**, and F. ALLISON, Mitre Hotel, Penrith.

IV. (£2.)—MORGAN BROS., Taunton, **Blink Bonny II**.

CLASS 45.—*Mare or Gelding, any height, jumping over the course in the best form on the 3rd day of the Show.* (25 entries.)

**Equal I. (£9.)**—E. G. DORSE, Trull, Taunton, **Canopeum**, T. GLENCROSS, Chippenham, **Peter Pan**, F. ALLISON, Penrith, **Nettles**.

**Equal IV. (£1.)**—F. V. GRANGE, Nantwich, grey gelding, **Desire**.

**Equal IV. (£1.)**—A. BRAKE, Limington, brown mare, **Belinda**.

CLASS 46.—*Mare or Gelding, any height, jumping highest on the 3rd day of the Show.* [8 entries.]

(£1 was added to the Prizes offered for every 6 inches over 5 feet cleared by the winning animals.)

I. (£15) and additional £2.—Miss M. A. BULLOWS, Edgbaston, bay gelding, **Toby**.

**II. (£7)** and additional **£2**.—T. GLENCROSS, Chippenham, **Mascot**.

**III. (£5)** and additional **£1**.—F. C. MINOPRIO, Avening, brown gelding, **Humphrey**.

CLASS 47.—*Mare or Gelding, over 15 hands, jumping over the course in the best form on the 4th day of the Show.* [14 entries.]

**Equal I. (£11)**—E. G. DORSE, Trull, Taunton, **Yutoi**, and F. C. MINOPRIO, Avening, brown gelding, **Humphrey**.

**III. (£5)**.—T. GLENCROSS, Chippenham, **Peter Pan**.

**IV. (£2)**.—J. TAYLOR, Warrington, bay gelding, **Tiny**.

CLASS 48. *Mare or Gelding, 15 hands and under, jumping over the course in the best form on the 4th day of the Show.* [11 entries.]

**I. (£15)**.—T. GLENCROSS, Chippenham, **Cigarette**.

**II. (£7)**.—F. ALLISON, Penrith, **Nettles**.

**III. (£5)**.—P. L. RUSSELL-ALLEN, Northwich, bay gelding, **Tony**.

**IV. (£2)**.—E. G. DORSE, Trull, Taunton, **John Peel**.

#### CHAMPION CLASS.

CLASS 49.—*Mare or Gelding, any height, having won a Prize in Classes 42 to 48, jumping over the course in the best form on the 4th day of the Show.* [9 entries.]

**I. (£20)** and Special\*—F. V. GRANGE, Nantwich, **Desire**.

**Equal II. (£7 10s.)**.—Miss M. A. BULLOWS, Edgbaston, bay gelding, **Toby**, and F. ALLISON, Penrith, **Nettles**.

#### SPECIAL PRIZE.

\* Given by the British Show Jumping Association to Members of that Association who had paid their Subscriptions for the current year. A Silver Medal to the owner of the Horse making the least number of faults in Class 49, the Horse being a prize winner in the Class and not having previously won the Medal this year.

# CATTLE.

## DEVON.

(£37 towards the Prizes in the Devon Classes and the Champion Prizes were given by the Devon Cattle Breeders' Society).

CLASS 50.—*Devon Cow or Heifer, in-Milk or in calf, calved in or before 1927.* [5 entries.]

**I. (£10)** and Champion (**£5**)\*—GORDON C. SKINNER, Pound, Bishops Lydeard, **Pound Beauty 66th**, born 26th June, 1923; s Pound Larker (10282), d Heather-ton Beauty 65th (31619), s d Gatton Prince 6th. (Last calf 13th December, 1929).

**II. (£5)** and Reserve for Champion\*—W. J. THOMAS, Prospect House, Landkey, Barnstaple, **Clampit Gay Lass 27th** (38900), born 26th January, 1926, bred by Cecil Brent, Clampit, Callington; s Pound Romper (12413), d Clampit Gay Lass 20th (34698).

**III. (£2.)**—FRED. W. VERNEY, Avercombe, Bishopsnympton, **Tulips Pansy** (36622), born 29th January, 1923, bred by Harry Britton, Jersey Farm, Sampford Peverell, Tiverton; s Highfield Warbaby (9342), d Gornhay Tulip (31649), s d Tumbler Secundus (9490).

**R.**—ABRAHAM SKINNER NEWBERY, junr., Newenham House, Axminster, **Riddlecombe Rosebud 2nd** (38127), born 26th April, 1924, bred by R. G. Harris, Riddlecombe Hole, Ashreigney; s Upcott Deputy (12073), d Riddlecombe Rosebud (35947), s d Pixford Gotha (10259). (Last calf 31st March, 1929).

**H.C.**—H. H. BROADMEAD, Enmore Castle, near Bridgwater, Somerset, **Enmore Maggie**, born 26th December, 1926; s Clampit Dreadnought (11797), d Highfield Daisy 3rd (37219), s d Highfield Dumping (10592). (Last calf 15th December, 1929).

CLASS 51.—*Devon Dairy Cow, in-Milk or in calf, the property of a member of the Devon Cattle Breeders' Society and entered in the Dairy Section of the Herd Book.* [2 entries.]

**I. (£10.)**—R. A. CLARKE & SONS, Manor Farm, Chiselborough, **Dewdrop 1st**, born 24th December, 1921; s Roadwater Donovan (10299), d Dewdrop, s d Town Private (8698). (Last calf 2nd September, 1929).

**II. (£5.)**—Ditto, ditto, **Carnation 6th** (36760), born 7th August, 1924; s Roadwater Donovan (10299), d Carnation 2nd (32720), s d Town Dairy Lad (9861). (Last calf 26th March, 1930).

\* Given by the Devon Cattle Breeders' Society, for the Best Cow of Heifer exhibited in the Devon Classes.

CLASS 52.—*Devon Heifer, calved in 1928.* [9 entries.]

**I. (£10.)** H.R.H. THE PRINCE OF WALES, K.G., Duchy Home Farm, Stoke Climsland, Cornwall, **Coombeshead Countess**, born 4th January; s Coombeshead Conqueror (13063), d Coombeshead Crocus (31587), s d Clampit Gay Laddie (9197).

**II. (£5.)**—THOMAS YEO, Court Barton, Abbots Bickington, Beaworthy, born 10th July; s Swank, d Crazlowman Primula, s d Highfield Harold.

**III. (£2.)**—J. C. H. THOMAS, Bartridge, Umlerleigh, Devon, **Clampit Gay Lass 31st** (41044), born 29th February, bred by C. Brent, Clampit, Callington; s Pound Romper (12413), d Clampit Gay Lass 20th (34698), s d Highfield Gem (8919).

**R.**—THOMAS JOHN PEARCEY, Peadhill, Tiverton, Devon, **Peadhill Caroline 11th** (41602), born 1st January; s Clampit Masterpiece 2nd (12598), d Peadhill Caroline 6th (38445), s d Pixford Dryad (10718).

**V.H.C.**—Capt. M. L. BULLER, M.C., Downes, Crediton, Devon, **Downes Cherry** (41099), born 24th April; s Stitchpool Gentleman (13755), d Downes Careless (31696), s d Destroyer (8835).

**H.C.**—R. GYNN & SON, Treslay, Camelford, Cornwall, **Treslay Piccaninny 1st** (41382), born 8th May; s Netherexce Good Sort (13693), d Taunton Flower (36922), s d Nowers Hangeridge (11606).

**C.**—G. C. ALEXANDER, Manor House, Winterbourne Stoke, Salisbury, **Stoke Dahlia 3rd** (40953), born 2nd March; s Clampit Flier (12594), d Stoke Dahlia (34624), s d Stitchpool Loopie (10322).

CLASS 53.—*Devon Heifer, calved in 1929.* [14 entries.]

**I. (£10.)** ABRAHAM SKINNER NEWBERRY, junr., Newenham House, Axminster, **Newenham Nancy 4th**, born 6th March, bred by C. M. Shrimpton, Glanville Farm, Broadhembury; s Conquest Heather Boy (13942), d Sandhill Hester 15th (37093), s d Roadwater Buttermann (11645).

**II. (£5.)**—J. C. H. THOMAS, Bartridge Umlerleigh, Devon, **Clampit Gay Lass 32nd**, born 12th February, bred by C. Brent, Clampit, Callington; s Pound Romper (12413), d Clampit Gay Lass 20th (34698), d Highfield Gem (8919).

**III. (£2.)**—G. C. ALEXANDER, Manor House, Winterbourne Stoke, Salisbury, **Stoke Gay Lass 2nd**, born 17th January; s Stoke Glory (13760), d Clampit Gay Lass 12th (31632), s d Highfield Gem (8919).

**R.**—F. J. STANBURY & SON, Carey Barton, St. Giles-in-the-Heath, Launceston, Cornwall, **Carey Topsy 6th**, born 20th February; s Highfield Cowboy (11514), d Carey Topsy (33396), s d Pound Laureate (9428).

**V.H.C.**—R. GYNN & SON, Treslay, Camelford, Cornwall, **Treslay Snowdrop 1st** (Vol. 53), born 3rd February; s Netherexce Good Sort (13693), d Lambrenny Favourite (38433), s d Whiteleigh Captain (11293).

**H.C.**—GORDON C. SKINNER, Pound, Bishops Lydeard, **Pound Fillpan 19th**, born 8th February; s Gay Boy (12656), d Pound Fillpan 18th (40700), s d Crazelowman Blend.

**C.**—ABRAHAM SKINNER NEWBERRY, junr., **Newenham Nancy 3rd**, born 12th January; s Clampit Goldmine (13045), d Bowden Primrose (33016), s d Overton Gold Coin 2nd (10236).

CLASS 54. — *Devon Bull, calved in or before 1927.* [2 entries.]

**I. (£10.)**—ABRAHAM TRIBLE & SONS, Halsdon, Holsworthy, **Nerrol's Best Man**, born 16th February, 1923, bred by R. Bruford, Nerrols, Taunton; s Highfield Advance (9318), d Nerrols Harebell 2nd (31667), s. d Highfield Chieftain (8915).

**II. (£5.)**—H. H. BROADMEAD, Enmore Castle, near Bridgwater, Somerset, **Werrington Lord** (13831), born 19th April, 1926, bred by A. M. Williams, Werrington Park, Launceston, Cornwall; s Nerrols Best Man (12374), d Cothelstone Ruth (32921), s d All But (9935).

CLASS 55. — *Devon Bull, calved in 1928.* [7 entries.]

**I. (£10)** and R. for Champion† **FRED STANBURY**, Ham Mill, Werrington, Launceston, **Werrington Royalist** (14681), born 23rd February, bred by A. M. Williams, Werrington Park, Launceston; s Nerrols Best Man (12374), d Cothelstone Ruth (32921), s d All But (9935).

**II. (£5.)**—Major R. C. COLDWELL, O.B.E., Spring Grove, Milverton, Somerset **Carey Barrister** (Vol. 52), born 17th March, bred by F. J. Stanbury, Carey Barton, St. Giles-in-the-Heath, Launceston, Cornwall; s Highfield Cowboy (11514), d Carey Darkie 5th (37471), s d Cutsey Guardsman (11432).

**III. (£2.)**—A. M. WILLIAMS, Werrington Park, Launceston, Cornwall, **Clampit Loyalty**, born 21st May, bred by Cecil Brent, Clampit, Callington, Cornwall; s Highfield Gem (8919), d Clampit Lady Launceston 6th (37754), d Pound Romper (12413).

**R. ELAND CLATWORTHY**, Cutsey, Trull, Taunton, **Blakes Trumpeter** (14316), born 16th February, bred by Mrs. R. Donne Hancock, Blakes Halse, Taunton, Somerset; s Clampit Go Well (12186), d Blakes Moonlight (32941), s d Pound Paragon (10285).

**V.H.C.** DANIEL COLE & SON, Hayne Barton, Cullompton, Devon, **Court Ambassador** (Vol. 53), born 10th November, bred by H.C. Hancock, The Court, Milverton, Somerset; s Bickley Ambassador (12135), d Broad 22nd (31946), s d Horridge Admiral (9350).

**C.**—Major-Gen. Sir REGINALD BARNES, Oakhay Barton, Stoke Canon, Devon, **Oakhay Extra 2nd**, born 30th August; s Stitchpool Gentleman (13755), d Oakhay Rosita (38873), s d Rocknell Ruler (11205).

CLASS 56. — *Devon Bull, calved in 1929.* [10 entries.]

**I. (£10)** and Champion (**£5**)†—H.R.H. THE PRINCE OF WALES, K.G., Duchy Home Farm, Stokeclimsland, Cornwall, **Coombeshead Monarch**, born 18th February; s Kittisford Monomark (13640), d Coombeshead Gay Girl (38790), s d Highfield Gem (8919).

† Given by the Devon Cattle Breeders' Society, for the Best Bull exhibited in the Devon Classes.

**II. (£5.)**—**PHILIP HENRY HEARNE**, Bratton, Clovelly, **Hawthorn Gem**, born 30th April, bred by Robert Maunder, Hawthorn, Bathealton, Wiveliscombe, Somerset; s Coombeshead Grand Duke (13540), d Park Model 2nd (36564), s d Loxley Curley Boy (11566).

**III. (£2.)**—**S. WEBBER**, Hill Farm, Tiverton, **Peadhill Perfection**, born 19th January, bred by Mr. Pearcey, Peadhill, Tiverton; s Clampit Masterpiece, d Peadhill Caroline, s d Crazelowman True Type.

**R.**—**GORDON C. SKINNER**, Pound, Bishops Lydeard, **Duke of Pound 2nd**, born 6th June; s Charton Tiptop 2nd (13515), d Pound Duchess 18th (38532), s d Clampit Dreadnought (11797).

**V.H.C.**—**FRED STANBURY**, Ham Mill, Werrington, Launceston, **Ham Mill Favourite 4th**, born 17th May; s Clampit Faithful (12593), d Northmoor Pansy (32460), s d Gotton Prince 2nd (8070).

**C.**—**G. C. ALEXANDER**, Manor House, Winterbourne Stoke, Salisbury, **Stoke Goldcoin**, born 20th May; s Stoke Glory (13760), d Cutsey Lass (31776), s d Highfield Gem (8919).

**CLASS 57.**—*Devon Dairy Bull, calved in 1928 or 1929, entered in the Dairy Section of the Devon Herd Book, Dam and Sire's Dam having yielded a minimum of 6,000lbs. Milk during a Government stipulated year. [2 entries.]*

**I. (£10.)**—**MRS. WILLIAM GOULD BUSK**, Wraxall Manor, Dorchester, Dorset, **Wraxall Colin**, born 25th October, 1928; s Wraxall Leopold, d Wraxall Curl 5th, s d Wyndthorpe Luxurious (9919, Vol. XLI). Vol. LIII in course of preparation).

**II. (£5.)**—**R. A. CLARKE & SONS**, Manor Farm, Chiselborough, **Chiselborough Quality**, born 1st April, 1929; s Wynthorpe Dan (14276), d Sweetlips 1st (36791), s d Roadwater Donovan (10299). (Dam Vol. LII, Page 546; Sire Vol. XLIX, Page 592).

#### NOVICE PRIZES.

*Best Cow or Heifer exhibited in the Devon Classes by a Member of the Devon Cattle Breeders' Society who had not previously won a prize at any County Show or at the Bath and West, R.A.S.E., Royal Counties or London Dairy Shows. [7 entries.]*

**I. (£8.)** **W. J. THOMAS**, Prospect House, Landkey, Barnstaple, **Clampit Gay Lass 27th** (38900), born 26th January, 1926, bred by Cecil Brent, Clampit, Callington; s Pound Romper (12413), d Clampit Gay Lass 20th (34698).

**II. (£4.)**—**J. C. H. THOMAS**, Bartridge, UMBERLEIGH, Devon, **Clampit Gay Lass 31st** (41044), born 29th February, bred by C. Brent, Clampit, Callington; s Pound Romper (12413), d Clampit Gay Lass 20th (34698), s d Highfield Gem (8919).

**III. (£2.)**—Ditto, ditto, **Clampit Gay Lass 32nd**, born 12th February, bred by C. Brent, Clampit, Callington; s Pound Romper (12413), d Clampit Gay Lass 20th (34698), d Highfield Gem (8919).

**R.**—GEORGE VENNING, Langunnett Barton, Lerryn, Lostwithiel, Cornwall, **Langunnett Nancy 5th**, born 3rd February; s Town Bountiful, d Langunnett Nancy 4th, s d William.

**C.**—WALTER J. WHITE, Hallhayes Farm, Sanford Moor, Wellington, **Hallhayes Queen**, born 3rd January, bred by J. Frost, Red Ball, near Wellington, Somerset; s Nowers Delight (12795). (Last calf 17th January, 1930).

*Best Bull exhibited in the Devon Classes by a Member of the Devon Cattle Breeders' Society who had not previously won a prize at any County Show or at the Bath and West, R. A.S.E., Royal Counties or London Dairy Shows. [4 entries.]*

**I. (£8.)**—PHILIP HENRY HEARN, Bratton, Clovelly, **Hawthorn Gem**, born 30th April, bred by Robert Maunder, Hawthorn, Bathealton, Wiveliscombe Somerset; s Coombeshead Grand Duke (13540), d Park Model 2nd (36564), s d Loxley Curley Boy (11566).

**II. (£4.)**—DANIEL COLE & SON, Hayne Barton, Cullompton, Devon, **Court Ambassador** (Vol. 53), born 10th November, bred by H. C. Hancock, The Court, Milverton, Somerset; s Bickley Ambassador (12135), d Broad 22nd (31946), s d Horridge Admiral (9350).

**III. (£2.)**—S. WEBBER, Hill Farm, Tiverton, **Peadhill Perfection**, born 19th January, bred by Mr. Pearcey, Peadhill, Tiverton; s Clampit Masterpiece, d Peadhill Caroline, s d Crazelownman True Type.

**R.** GEORGE VENNING, Langunnett Barton, Lerryn, Lostwithiel, Cornwall, **Langunnett Bountiful**, born 5th February; s Town Bountiful, d Langunnett Primrose 4th (C.1373), s d Clampit General (10480).

## SPECIAL PRIZE.

GIVEN BY F. BEADLE, ESQ.

*Silver Cup for the best 2 Devon Heifers, under 3 years old, the property of one owner, entered in the Devon Classes.*

**I.**—J. C. H. THOMAS, Bartridge, Umlerleigh, Devon, **Clampit Gay Lass 31st** (41044), born 29th February, bred by C. Brent, Clampit, Callington; s Pound Romper (12413), d Clampit Gay Lass 20th (34698), s d Highfield Gem (8919). — **Clampit Gay Lass 32nd**, born 12th February, bred by C. Brent, Clampit, Callington; s Pound Romper (12413), d Clampit Gay Lass 20th (34698), d Highfield Gem (8919).

**R.**—ABRAHAM SKINNER NEWBERY, junr., Newenham House, Axminster, **Newenham Nancy 4th**, born 6th March, bred by C. M. Shrimpton, Glanville Farm, Broadhembury; s Conquest Heather Boy (13942), d Sandhill Hester 15th (37093), s d Roadwater Buttermen (11645). — **Newenham Nancy 3rd**, born 12th January; s Clampit Goldmine (13045), d Bowden Primrose (33016), s d Overton Gold Coin 2nd (10236).



## SOUTH DEVON.

CLASS 58.—*South Devon Cow, calved before 1928, in calf or having had a full-time calf on or after January 1, 1930.* [5 entries.]

**I. (£10)** and Champion (**£4 4s.**)\*—HENRY CHAFFE, Harestone, Brixton, S. Devon, **Manor Primrose 2nd**, born May 6th, 1923, bred by Mr. Walke, East Allington, Devon; s Hacombe Ruby's King, d Primrose 6th, s d Offields Monarch. (Last calf 2nd October, 1929).

**II. (£5.)**—The Right Hon. LORD MILDMAY OF FLETE, Ermington, Devon, **Great Court Gentle**, born 25th March, 1925, bred by Dunning Hooper & Son, Great Court, Totnes; s Pamflete Silver King, d Gentle.

**III. (£2.)** Miss JERVOISE SMITH, Sandwell, Harberton, **Sandwell Sundew**, born 17th June, 1926; s Pamflete Smashaway, d Moss, s d Hacombe King. (Last calf 23rd August, 1929).

CLASS 59.—*South Devon Heifer, calved in 1928.* [4 entries.]

**I. (£10.)**—The Right Hon. LORD MILDMAY OF FLETE, Ermington, Devon, **Englebourne Marjorie**, born 28th February, bred by T. W. Luscombe, Great Ingelbourne, Totnes; s Worswell Peter, d Marjorie 2nd.

**II. (£5.)**—HENRY CHAFFE, Harestone, Brixton, S. Devon, **Harestone Strawberry 2nd**, born 24th January; s Trehele Forester 2nd (10033), d Harestone Strawberry.

**III. (£2.)** The Right Hon. LORD MILDMAY OF FLETE, **Flete Pansy**, born 24th March; s Leigham Favourite, d Flete Pink, s d Random.

**R.**—Major H. R. Fox, M.C., S. Battisburgh, Holbeton, **Dewdrop 2nd**, born 2nd March; s Victor (10951), d Dewdrop (20229), s d Radium 4th (9968).

CLASS 60.—*South Devon Heifer, calved in 1929.* [5 entries.]

**I. (£10.)**—The Right Hon. LORD MILDMAY OF FLETE, Ermington, Devon, **Flete Daffodil**, born 1st January; s Court Perfection, d Flete Crocus, s d Gerston King.

**II. (£5.)**—H. WHITLEY, Primley, Paignton, **Primley Vanity**, born 31st January; s Rowden Eustace (11893), d Primley Nana, s d Primley Kenneth.

**III. (£2.)**—Major H. R. Fox, M.C., S. Battisburgh, Holbeton, S. Devon, **Baroness 3rd**, born 15th March; s Victor (10951), d Baroness 2nd (30226), s d Radium 4th.

**R.**—HENRY CHAFFE, Harestone, Brixton, S. Devon, **Harestone Blossom**, born 6th January; s Trehele Forester 2nd (10033), d Harestone Blossom.

\* Given by the S Devon Herd Book Society, for the Best Cow or Heifer exhibited in the S Devon Classes.

CLASS 61.—*South Devon Bull, calved before 1929.* [4 entries.]

**I. (£10) and Champion (£4 4s.)†**—The Right Hon. LORD MILDMAY OF FLETE, Ermington, Devon, **Court Perfection**, born 30th April, 1923, bred by Walter Trant, Diptford Court; s Myrtle Grove 2nd, d Myrtle 2nd, s d Worswell Perfection.

**II. (£5) and R. for Champion†**—JOHN WAKEHAM, Rowden, Newton Ferrers, **Cadet**, born 25th July, 1925, bred by the late Lewis Alfred Oldreive, West Prawle, Salcombe, Devon; s Lavender's Boy 3rd (9863), d Vera 3rd (21866), s d Bowden Strawberry Boy.

**III. (£2.)**—R. G. ROGERS, Wonton, South Brent, **Flete King 9th** (11779), born 7th November, 1926, bred by Lord Mildmay, Flete, Ermington; s Gerston King (10700), d Flete Lovely (28891), s d Trehele Forester (9500).

CLASS 62.—*South Devon Bull, calved in 1929.* [5 entries.]

**I. (£10.)**—Major H. R. Fox, M.C., S. Battisburgh, Holbeton, S. Devon, **Orange Boy**, born 19th March, 1927, bred by Major L. Sayers, Alston, Holbeton, S. Devon; s Hall Torrs King (12042), d Buttercup 4th (28119), s d Keaton Perfection.

**II. (£5.)**—J. SPARROW WROTH & SONS, Coombe, Aveton Gifford, S. Devon, **Coombe Victor**, born 28th April; s Battisborough Good Sort (11335), d Snowflake 3rd (29548), s d Lavenders Boy 2nd (6001).

**III. (£2.)**—WALTER TRANT, Diptford Court, South Brent, **Diptford Downs Combination**, born 26th February, bred by Walter Hunt, Diptford Down, S. Brent; s Mount Barton President (11862), d Milkmaid (22168), s d Coleridge Champion (5863).

**R.**—A. SOPER & SONS, Gerston, Totnes, **Gerston Eclipse 9th**, born 3rd January; s Tinnell Eclipse (11268), d Synda 16th (32798), s d Worswell Peer (10538).

**H.C.**—The Right Hon. LORD MILDMAY OF FLETE, Ermington, Devon, **Flete Perfection 2nd**, born 28th February; s Court Perfection, d Flete Sunbeam, s d Mount Barton Prince.

# SPECIAL PRIZE.

GIVEN BY J. PARNELL TUCKER, ESQ.

*Best Pair of Heifers exhibited by one owner in Classes 59 and 60.*

**I. (£10 10s.)**—LORD MILDMAY OF FLETE.

**R.**—Major H. R. Fox.

† Given by the S. Devon Herd Book Society, for the Best Bull exhibited in the S. Devon Classes.

## DAIRY SOUTH DEVON.

(£5 towards the Prizes in Class 64 were given by Capt. J. D. Gouldsmith).

CLASS 63. — *Dairy South Devon Dairy Cow, any age, the property of a Member of the Dairy South Devon Cattle Society and entered or eligible for entry in that Society's Herd Book.* [11 entries.]

**I. (£10).**—GEORGE FURNEAUX, Luson, Yealmpton, **Luson Milkmaid 6th** (A.L. 10090), born 8th July, 1923; s Treeby Boy, d Luson Milkmaid 1st. (Last calf 22nd February, 1930).

**II. (£5).**—DARTINGTON HALL, LTD., Old Parsonage Farm, Dartington, **Englebourne Daisy 7th** (A.L. 10255), 4 years

**III. (£2).** Ditto, ditto, **Dartington Tilda** (A.L. 11345), born 1922, bred by Mr. Rowe, Abbotskerswell; s Slantor Victor 2nd (9465), d Sherford Annie (14604). (Last calf 27th February, 1930).

**R.**—Ditto, ditto, **Cherry** (A.L. 7187) (438), 8½ years

**V.H.C.**—SEALE HAYNE AGRICULTURAL COLLEGE, Newton Abbot, **Foreman 3rd.** (Last calf 9th May, 1929).

**H.C.**—DARTINGTON HALL, LTD., Old Parsonage Farm, Dartington, **Dartington Daisy 2nd** (A.L. 12431), born 1923.

**C.**—Ditto, ditto, **Dartington Pat** (A.L. 8730), born 3rd July, 1922, bred by F. S. Furneaux, Hele, Ashburton; s Ranger (A.L. 4296), d Berry Pansy (A.L. 3358). (Last calf 26th January, 1930).

CLASS 64. — *Dairy South Devon Heifer, in-Milk or in calf, not more than 3 years old on the 1st day of the Show.* [5 entries.]

**I. (£10).**—THOMAS EVENS, Ramsland, Yealmpton, **Ramsland Bluebell** (A.L. 12045), born 6th November, 1927; s Ramsland General (A.L. 8541), d Ramsland Freda (A.L. 6841).

**II. (£5).**—GEORGE FURNEAUX, Luson, Yealmpton, Devon, **Luson Beauty 1st** (A.L. 12442), born 15th March, 1928; s Ramsland Hero (A.L. 9664), d Luson Milkmaid 6th (A.L. 10090).

**III. (£2).**—DARTINGTON HALL, LTD., The Barton Farm, Dartington Hall, Totnes, **Dorothy 3rd** (A.L. 11566), born 13th July, 1927, bred by the late Mrs. Ernest Cocks, Raneleigh, Wembury; s Keaton Perfection (9244), d Dorothy (13181). (Last calf 4th March, 1930).

**R.**—SEALE HAYNE AGRICULTURAL COLLEGE, Newton Abbot, **Jill**, born 17th August, 1927; s Silver Boy (9999), d Gladys (A.L. 10801). (Last calf 22nd December, 1929).

CLASS 65. — *Dairy South Devon Heifer, not more than 2 years old on the 1st day of the Show.* [3 entries.]

**I. (£10).**—DARTINGTON HALL, LTD., The Barton Farm, Dartington, **Gentle 7th** (A.L. 12961), born 24th October, 1928; s Collins Perfection (A.L. 8123), d Gentle 6th (A.L. 10095).

**II. (£5).**—Ditto, ditto, **Alice 2nd** (A.L. 12983), born 8th December, 1928, bred by F. M. Crook, The Barton Farm, Dartington Hall; s Ramsland General 2nd (A.L. 8541), d Alice (A.L. 12982).

**R.**—NORMAN D. MILLER, Buckyette, Totnes, Devon, **Buckyette Pansy 2nd** (A.L. 13260), born 29th December, 1928; s Buckyette Conqueror (A.L. 7799), d Buckyette Pansy (A.L. 7124).

## SHORTHORN.

CLASS 66.—*Shorthorn Cow or Heifer, in-Milk, calved in or before 1927.* [6 entries.]

**I. (£10.)**—Miss NANCY FEILDHOUSE, Shipton Manor, Andoversford, Glos., roan, **Cotehay Augusta 5th**, born 6th March, 1927, bred by the late Col. Fairfax Rhodes, Brockhampton Park, Andoversford; s Farmhill Ideal (189630), d Sherborne Augusta, s d Edgecote Promotion (111682). (Last calf 25th October, 1929).

**II. (£5.)**—H.R.H. THE PRINCE OF WALES, K.G., Home Farm, Stoke Climsland, Cornwall, roan, **Climsland Princess Royal 4th**, born 30th January, 1924; s Collynie Herald (179685), d Climsland Princess Royal 2nd (9646), s d Christian King (147900).

**III. (£2.)**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, dark roan, **Basildon Bounty 2nd**, born 15th June, 1925, bred by Major J. A. Morrison, D.S.O., Basildon, Goring, Reading; s Basildon Matadore (178330), d Bright Butterfly (Vol. 63), s d Knight of Collynie (112229).

**R.**—WALTER J. WHITE, Hallhayes Farm, Sanford Moor, Wellington, white, **Hall Hayes Snowdrop**, bred 14th January, 1927, bred by A. Brown, Woodland, Somerset; s Rhode Conqueror 4th (193417), d Bar Lance (A. 9088). (Last calf 26th December, 1929).

**H.C.**—GEOFFREY FOWNES LUTTRELL, Dunster Castle, Dunster, Somerset, white, **Rose of Glendale**, born 24th March, 1925, bred by F. J. Moralee, Edge House, Barrasford; s Illustrious (190799), d Rose of Weardale (6308), s d Alnwick Star (140411). (Last calf 28th July, 1929).

CLASS 67.—*Shorthorn Heifer, calved in 1928.* [2 entries.]

**I. (£10.)**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, white, **Basildon Christina 5th**, born 22nd March, bred by Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring, Herts; s Quartermaster (132925), d Basildon Christina 2nd (65362), s d Collynie Grand Prince (154931).

**R.**—Col. Sir FRANK BEAUCHAMP, Bart., Woodborough House, Bath, red roan, **Woodborough Clara 5th**, born 31st August; s Gainford Nonpariel Wonder (207491), d Rickford Girl, s d Collynie Royal Regent (148043).

CLASS 68.—*Shorthorn Heifer, calved in 1929.* [4 entries.]

**I. (£10.)**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, roan, **Violet 28th**, born 28th January, bred by J. Durno, Uppermill, Tarves, N.B.; s Millhills Broad Arrow (209677), d Sittyton Violet 23rd (47241), s d Collynie Hero (170456).

**II. (£5.)**—Sir GEORGE VERNON PROCTOR WILLS, Bt., Langford Court Farm, Langford, near Bristol, roan, **Rickford Rosewood 2nd**, born 23rd January; s Cudham Prospect (206506), d Rosewood 108th, s d Golden Champion (156048).

**III. (£2.)**—H.R.H. THE PRINCE OF WALES, K.G., Home Farm, Stoke Climsland, Cornwall, roan, **Climsland Augusta 13th**, born 1st January; s Climsland Golden Ray (197372), d Climsland Augusta 10th (57506), s d Collynie Herald (179685).

**R.**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, roan, **Basildon Eliza 6th**, born 19th January, bred by Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring, Herts; s Millhills Rosecrucion (224992), d Basildon Eliza (Vol. 65), s d Knight Emblem (137418).

CLASS 69.—*Shorthorn Bull, calved before 1929.* [5 entries.]

**I. (£10).**—L. V. GARLAND, Greenbank, The Towans, Hayle, Cornwall, roan, **Climsland Clipper King** (214534), born 19th January, 1926, bred by H.R.H. The Prince of Wales, K.G., Marsh Farm, Cornwall; s Climsland Regal King 2nd (197380), d Daleaper Clipper, s d Queens Guard (166197).

**II. (£5).**—H.R.H. THE PRINCE OF WALES, K.G., Home Farm, Stoke Climsland, Cornwall, red, **Kinellar Keystone** (231290), born 10th April, 1928, bred by Sylvester Campbell, Kinellar, Kinaldie, Aberdeenshire; s Kinellar Graduate (208742), d Kinellar Rosewood 4th (34376), s d Clarion (154798).

**III. (£2).**—J. D. BOWEN, Nantfforch, Welshpool, roan, **Powysland Golden Star** (225663), Vol. 74, Page 300), born 7th April, 1927, bred by Earl of Powis, Powis Castle, Welshpool; s Royal Merlin (166726), d Powysland Broadhooks 3rd, s d Knight Champion (131804).

**R.**—GEOFFREY FOWNES LUTTRELL, Dunster Castle, Dunster, Somerset, red, **Gainford Nonpareil Wonder**, born 20th May, 1925, bred by George Harrison, Gainford Hall, Darlington; s Gainford Raphire (189911), d Nonpareil Violet 3rd, s d Baluakyle Mushel (129378).

**H.C.**—HARRY NORTON, Gains Cross, Blandford, Dorset, roan, **Iwerne Marquis 9th** (216606), born 27th November, 1926, bred by the late J. Ismay, Iwerne Minster, Blandford, Dorset; s Huxham Charming Duke (199687), d Iwerne Ringlet 2nd (260021), s d Kelmiscott Conjuror 19th (143185).

CLASS 70.—*Shorthorn Bull, calved in 1929.* [6 entries.]

**I. (£10) and Champion (£10)\*.**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, red, **Basildon Rosierucion**, born 11th March, bred by Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring, Herts; s Millhills Rosierucion (224992), d Basildon Lady Ramsden 3rd, s d Pendley Archer (201589).

**II. (£5).**—Miss NANCY FEILDHOUSE, Shipton Manor, Andoversford, Glos., red, **Elector of Stonelands** (Vol. 76), born 18th March, bred by Norman N. Lee, Stonelands, Arncliffe, Shipton-on-Craven; s Dargill Clarmount (170869), d Inverness Mistress Eliza, s d Quartermaster (132925).

**III. (£2).**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, white, **Basildon Rampier**, born 10th March; s Millhills Rosierucion (224992), d Basildon White Ramsden, s d Cudhorn Moonlight (162593).

**R.**—L. V. GARLAND, Greenbank, The Towans, Hayle, Cornwall, red, little white, **Towan Nonpareil King** (G.L.V. 15), born 19th April; s Climsland Clipper King (214534), d Towan Nonpareil, s d Bapton Prince George (168891).

**H.C.**—Col. Sir FRANK BEAUCHAMP, Bart., Woodborough House, Bath, roan, **Gainford Limbo**, born 26th March, bred by J. & R. Harrison, Gainford Hall, Gainford, Darlington; s Startforth Broadhooks King (226653), d Lily 30th (83991), s d Findon Vindictive (163274).

**C.**—GEOFFREY FOWNES LUTTRELL, Dunster Castle, Dunster, roan, **Dunster Renown**, born 28th August; s Gainford Nonpareil Wonder (207491), d Dunster Strawberry, s d Funny Marquis (198650).

\* Given by the Shorthorn Society for the Best Bull in the Shorthorn Classes entered in or eligible for entry in Coates's Herd Book, with Silver Medal to the Breeder.

## DAIRY SHORTHORN.

The First Prizes in Classes 71 and 72 (and a Silver Medal to the Breeder of the winners) were given by the Shorthorn Society and the First Prize in Class 75 by the Dairy Shorthorn Association.

CLASS 71. *Dairy Shorthorn Pedigree Cow, in-Milk, calved in or before 1926, eligible for, and entered in Coates's Herd Book, or pedigree accepted for such entry previous to the Show, and not having previously won a similar prize offered by the above-named Society in 1930, milked in the Ring before judging, under Conditions 54.* [4 entries.]

I. (£10.) —J. PIERPONT MORGAN, Estate Office, Wall Hall, Watford, red and little white, **Longhills Belle 2nd** (18128), born 13th January, 1920, bred by Mr. Smith, Longhills, Lincoln; s Oxford Bridegroom (121914), d Longhills Belle (Vol. 61, Page 1035), s d Duke of Darlington (115163). (Last calf 20th March, 1930).

II. (£5.) The Right Hon. LORD DULVERTON, Batsford Park, Moreton-in-Marsh, Glos., dark roan, **Batsford Wildeyes** (92933), (Vol. 73, p. 1171), born 1st May, 1926; s Thornby Prime Minister (167526), d Barrington Wildeyes 10th (Vol. 63, Page 1192), s d Baron (129435). (Last calf 25th April, 1930).

CLASS 72. *Pedigree Heifer, calved in or after 1927, eligible for, and entered in Coates's Herd Book, or pedigree accepted for such entry previous to the Show, and not having previously won a similar prize offered by the above-named Society in 1930, milked in the Ring before judging, under Condition 54.* [3 entries.]

I (£10.) —The Right Hon. LORD DULVERTON, Batsford Park, Moreton-in-Marsh, Glos., roan, **Batsford Ringlet 9th** (103860, Vol. 74, p. 1140), born 18th May, 1927; s Sorbrook Foggathorpe Premier 2nd (167526), d Batsford Ringlet 4th (69560), s d Thornby Lord Foggathorpe (167521). (Last calf 16th March, 1930).

CLASS 73.—*Dairy Shorthorn Pedigree Heifer, calved in 1928.*  
[1 entry.]

[NO AWARD.]

CLASS 74. —*Dairy Shorthorn Pedigree Bull, calved before 1929.*  
[4 entries.]

I. (£10) and R. for Champion\*—JOHN PIERPONT MORGAN, Estate Office, Wall Hall, Watford, red, **Aldenham Bellman** (212836), born 25th July, 1926; s Aldenham Lord Barrington (177679), d Longhills Belle 2nd (18128), s d Oxford Bridegroom (121914).

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\* Given by the Shorthorn Society for the Best Bull in the Shorthorn Classes entered in or eligible for entry in Coates's Herd Book, with Silver Medal to the Breeder.

**II. (£5.)**—Messrs. DEBENHAM & TORY, Anderson, Blandford, Dorset, roan, **Anderson Bates 15th** (220511), born 24th May, 1927, bred by Robert N. Tory, Anderson, Blandford, Dorset; s Anderson Champion Bates (186667), d Anderson Red Rose 2nd (Vol. 69, 1270), s d Kelmscott Conjuror 3rd (137269).

**III. (£2.)**—HARRY NORTON, Gains Cross, Blandford, Dorset, roan, **Iwerne Marquis 9th** (216606), born 27th November, 1926, bred by the late J. Ismay, Iwerne Minster, Blandford, Dorset; s Huxham Charming Duke (199687), d Iwerne Ringlet 2nd (260021), s d Kelmscott Conjuror 19th (143185).

**R.**—E. MACINTOSH, Boxhill Farm, Dorking, Surrey, roan, **Foxbury Dairyman Duke** (230237), born 9th March, 1928; s Parkhill Duke (174696), d Lock Tulip (2694), s d Dairyman (130512).

**CLASS 75.** *Dairy Shorthorn Pedigree Bull, calved 1929, entered or pedigree provisionally accepted for entry in Coates's Herd Book and registered or provisionally accepted for registration in the Year Book of the Dairy Shorthorn Association, and entries must have been accompanied by a certificate signed by the Secretary of the Association to this effect. (An animal having taken one of these prizes was not eligible to compete again the same year except at the R. A.S.E. Show)* [8 entries.]

**I. (£10) and Special (£10)†**—The Right Hon. LORD DULVERTON, Batsford Park, Moreton-in-Marsh, Glos., red and little white, **Batsford Wildeyes Testator** (Vol. 76), born 22nd February; s Sorbrook Troubadour (194229), d Batsford Wildeyes (92937), s d Thornby Prime Minister (167526).

**II. (£5.)**—DEBENHAM & TORY, Anderson, Blandford, Dorset, roan, **Anderson Imperial Minstrel** (Vol. 76), born 7th April; s Anderson Imperial Bates (220521), d Preshute Melody (Vol. 65, Page 961), s d Knowsley Precentor (126368).

**III. (£2) and R. for Special†**—Captain D. M. WILLS, Barley Wood, Wrington, Somerset, roan, **Barleywood Scarlet Runner**, born 27th May; s Thornby Ringer 5th (203395), d Babraham Crimson 4th (9692), s d Lord Lee 2nd (121257).

**R.**—E. MACINTOSH, Boxhill Farm, Dorking, Surrey, roan, **Foxbury Barrington Duke** (Vol. 76), born 16th February; s Plashwood Royalty (210343), d Merricks Barrington Duchess 3rd (72117), s d Barrowford Conjuror (161187).

**H.C.**—Major R. F. FULLER, Great Chalfield, Melksham, red, **Chalfield Rosieruelan 15th** (Vol. 76), born 12th March; s Bourneplace Eagle (213674), d Chalfield Rose 14th (73713), s d Preshute Waterloo Don (174965).

**C.**—JOHN PIERPONT MORGAN, Estate Office, Wall Hall, Watford, red and little white, **Loobagh Baron 32nd** (Vol. 76), born 13th April, bred by the Right Hon. Lord Daresbury, C.V.O., Mount Coote, Kilmallock, Co. Limerick, Ireland; s Iford Double Waterloo (190745), d Loobagh Barrington Duchess 13th (49317), s d Freshwater Persimmon (155868).

† Given by the Dairy Shorthorn Association for the Best Bull in Class 75, registered or provisionally accepted for registration in the Year Book of the Dairy Shorthorn Association and qualified in accordance with Conditions No. 55.

## HEREFORD.

CLASS 76.—*Hereford Cow or Heifer, in-Milk, calved before September 1, 1928.* (1 entry.)

I. (£10).—Sir DAVID R. LLEWELLYN, Bart., The Court, St. Fagans, **St. Fagans Snowgirl**, born 31st January, 1926; s Priory Norseman (46340), d Crossways Snowflake (Vol. 53, Page 681), s d America (34550). (Last calf 12th October, 1929).

CLASS 77.—*Hereford Heifer, calved on or after September 1, 1928.* [6 entries.]

I. (£10) and Champion (£10)\*—JOHN WALKER, Knightwick Manor, Worcester, **Knightwick Oyster Shell**, born 10th September, 1928; s Defence (38981), d Oyster Queen, s d Patchwork (34099).

II. (£5) and R. for Champion\*—Sir DAVID R. LLEWELLYN, Bart., The Court, St. Fagans, **St Fagans Pansylute**, born 25th November, 1928; s St. Fagans Paxolute (48655), d St. Fagans Pansy (Vol. 57, Page 359), s d Priory Norseman (46340).

III. (£2).—THOMAS LAWSON WALKER, The Cedars, Broadwas-on-Teme, Worces., **Ankerdine Excellent**, born 15th September, 1928; s Freetown Comrade (39181), d Ankerdine Exit (Vol. 56, Page 628), s d Eaton Albany (33629).

R.—WILLIAM GRAY FARMER, Withington Court, Hereford, **Genius** (E.D.K. 3), born 27th November, 1928; s Rightful Count (46410), d Glad Girl (Vol. 53, Page 319), s d President (37734).

H.C.—Sir DAVID R. LLEWELLYN, Bart., The Court, St. Fagans, **St. Fagans Emmielute**, born 7th October, 1928; s St. Fagans Paxolute (48655), d Crossways Emerald 3rd (Vol. 54, Page 651), s d Bounteous (36107).

CLASS 78.—*Hereford Bull, calved before September 1, 1928.* [5 entries.]

I. (£10) and Champion (£10)†—PERCY E. BRADSTOCK, Free Town, Tarrington, Herefordshire, **Free Town Admiral** (49233), born 3rd October, 1927; s Crossways Saphlute (44732), d Heather (Vol. 50, Page 383), s d Time Test (26529).

II. (£5).—JAMES MEDLICOTT, Bodenham Court, Hereford, **Rose Haughty**, born 14th April, 1928, bred by C. R. English, Evesbatch Court, Bishops Frome, Worcester; s Pivot of Pitsford (45259), d Rose Vanity (Vol. 55, Page 283), s d Brampton James (33412).

III. (£2).—T. L. WALKER, The Cedars, Broadwas-on-Teme, Worcester, **Ankerdine Royalist** (48861), born 29th September, 1927; s Oddfellow (39680), d Ankerdine Rosalind (Vol. 57, Page 529), s d Bodenham Goodword (36043).

R.—D. E. NEALE, Nant Fawr, Lisvane, Cardiff, **Winston 3rd**, born 29th December, 1927, bred by D. P. Barnett, Walterston Farm, Llanccarfan, Cardiff; s Winston 2nd (Vol. 46654), d Mayberry, s d Walterston Sam.

V.H.C.—Sir DAVID R. LLEWELLYN, Bart., The Court, St. Fagans, **St. Fagans Pandarus**, born 26th January, 1927; s Priory Norseman (46340), d Pansy of Pitsford 2nd (Vol. 54, Page 268), s d Prince of Pitsford (41499).

\* Given by the Hereford Herd Book Society for the Best registered Cow or Heifer in the Hereford Classes.

† Given by the Hereford Herd Book Society for the Best registered Bull in the Hereford Classes.



CLASS 79.—*Hereford Bull, calved on or after September 1, 1928.*  
[3 entries.]

I. (£10) and R. for Champion†—H. R. GRIFFITHS, Little Tarrington, Hereford, **Tarrington Defender**, born 9th December, 1928; s Gains Albion (45982), d Daglinak, s d Aldirend Conqueror (38464).

II. (£5).—PERCY E. BRADSTOCK, Free Town, Tarrington, Herefordshire, **Free Town Royalist**, born 7th March, 1929; s Gaines Albion (45982), d White Heather (Vol. 59, Page 188), s d Free Town Reformer (43719).

III. (£2).—JOHN WALKER, Knightwick Manor, Worcester, **Knightwick Gambler**, born 26th September, 1928; s Defence (38981), d Gamester Beauty 22nd, s d Levity (32697).

## SUSSEX.

CLASS 80.—*Sussex Cow or Heifer, in-Milk, calved before 1928.*  
[2 entries.]

I. (£10) and Silver Medal\*—Lt.-Col. J. R. WARREN, O.B.E., M.C., The Hyde, Handcross, Haywards Heath, Sussex, **Lock Knelle 2nd**, born 16th March, 1926, bred by E. Ezra, Lock, Partridge Green, Sussex; s Bolebroke Harlequins 3rd, d Marlands Lady Knelle, s d Jacobite. (Last calf, 2nd March, 1930).

II. (£5).—The Right Hon. LORD LECONFIELD, Petworth House, Petworth, Sussex, **Petworth Knott 8th**, born 17th March, 1927; s Lock Toreador 2nd (5924), d Petworth Knott 4th (19491), s d Newick Nobleman 3rd (4227). (Last calf, 6th January, 1930).

CLASS 81.—*Sussex Heifer, calved in 1928 or 1929.* [2 entries.]

I. (£10) and R. for Silver Medal\*—The Right Hon. LORD LECONFIELD, Petworth House, Petworth, Sussex, **Petworth Comely** (24749), born 15th September, 1928; s Hermitage Aribi (6464), d Oakover Comely 31st (22268), s d Oakover Chevalier 10th (5815).

R.—Lt.-Col. J. R. WARREN, O.B.E., M.C., The Hyde, Handcross, Haywards Heath, Sussex, **Handcross Stonesdown 2nd**, born 27th January, 1928; s Lock Duke 2nd, d Brownings Stonesdown 2nd, s d Brownings Miller 6th.

CLASS 82.—*Sussex Bull, any age.* [3 entries.]

I. (£10) and Silver Medal†—Lt.-Col. J. R. WARREN, O.B.E., M.C., The Hyde, Handcross, Haywards Heath, Sussex, **Handcross Harlequin**, born 4th February, 1929; s Ticehurst King Twin 2nd, d Lock Knelle 2nd, s d Bolebroke Harlequin 3rd.

II. (£5) and R. for Silver Medal‡—The Right Hon. LORD LECONFIELD, Petworth House, Petworth, Sussex, **Petworth Toreador 36th**, born 23rd April, 1929; s Lock Toreador 2nd (5924), d Lock Millmaid 6th (18390), s d Birling Geoffrey 2nd (4252).

R.—G. ELLIOT SEALY, Ryngmer Park, Lewes, Sussex, **Caburn Squire 2nd**, born 4th June, 1928, bred by Brigadier-General Holdsworth, Glynde Place, Glynde, Sussex; s Caburn Nobleman 1st (6374), d Snape Beauty 5th (17291), s d Snape Chieftain (3815).

† Given by the Hereford Herd Book Society for the Best registered Bull in the Hereford Classes.

\* Given by the Sussex Herd Book Society for the Best Cow or Heifer in the Sussex Classes registered or tendered for entry in the Herd Book.

‡ Given by the Sussex Herd Book Society for the Best Bull in the Sussex Classes registered or tendered for entry in the Herd Book.

## BRITISH FRIESIAN.

(One fourth of the Prize Money awarded and the Silver Medals in these Classes were given by the British Friesian Cattle Society, and animals entered must have been registered in the B.F.C.S. Herd Book proper, those registered in Supplementary Section not being eligible).

CLASS 83.—*British Friesian Cow or Heifer, any age, in-Milk.*  
[3 entries.]

I. (£10).—ARTHUR ALLEN, The Manor, Chesterblade, Somerset, **Glen Waiwera** (82144), born 4th April, 1924; s Kingswood Ynteseries (14531), d Glen Werribee (52964), s d Dunninald Gaatsomairschaap (6175). (Last calf 21st April, 1929).

II. (£5).—WILLIAM TURNER, Offerton, Hindlip, Worcester, **Hedon Dolly** (32938), born 20th October, 1924, bred by Dr. J. Soutter, Souttergate, Hedon, East Yorks; s Lochlands Roland (23527), d Moray Dolly (55362), s d Moray Plumer (12305).

CLASS 84.—*British Friesian Heifer, not in Milk, calved in 1928.*  
[1 entry.]

I. (£10) and R. for Silver Medal\*—FRANCIS NUTTALL TERRY, Chebbard Dorchester, **Chebbard Mazeppa Faithful** (Vol. 18, 124886), born 29th July; s Felhampton General Mazeppa (25637), d Felhampton Faith (71060), s d Bulkeley Klashe's Second Ceres (P.I. 11187).

CLASS 85.—*British Friesian Heifer, calved in 1929.* [4 entries]

I. (£10) and Silver Medal\*—ARTHUR ALLEN, The Manor, Chesterblade, Somerset, **Glen Wallaby** (Vol. 19), born 21st April; s Glen Akryn (31035), d Glen Waiwera (82144), s d Kingswood Ynteseries (14531).

II. (£5). MRS. P. TORY, Shapwick, Blandford, Dorset, **Timsbury Merit**, born 2nd May, bred by Mr. Wilson-Wood, Timsbury Manor, Romsey; s Thurston Dorin Wanderer (30021), d Terling Noreen (36242), s d Terling Dutchman (P.I. 5643).

III. (£2).—FRANCIS NUTTALL TERRY, Chebbard, Dorchester, **Chebbard Jess**, born 11th January; s Challoner Dutch Emperor (30667), d Challoner Jess's Elsie (102576), s d Hedges Jantwo (20307).

R.—SIR ERNEST S. WILLS, Bart., Littlecote, near Hungerford, Wilts, **Littlecote Medlar**, born 13th March; s Iken Bertus 21st (31235), d Upminster Medlar (57808), s d Sudbourne Botermijn (12741).

CLASS 86.—*British Friesian Bull, calved before 1929.* [3 entries.]

I. (£10) and Silver Medal†—GEORGE GEE, Mayford House, Mayford, near Woking, Surrey, **Glyndbourne Achilles** (P.I. 31043), born 7th October, 1926, bred by Capt. John Christie, M.C.; s Hache Achille (P.I. 22919), d Glyndbourne (imported 1922) Karrika (61788), s d Rikus (F.R.S. 6542).

\* Silver Medal for the Best Cow or Heifer in the British Friesian Classes.

† Silver Medal for the Best Bull in the British Friesian Classes.

xxxiv *Prizes awarded to British Friesian and Aberdeen-Angus Cattle.*

**II. (£5)** and R. for Silver Medal†—**ARTHUR ALLEN**, The Manor, Chester-blade, Somerset, **Vyne Drummer Boy** (35087), born 9th August, 1928, bred by T. Bowden, Vyne Farm, Sherborne St. John, Basingstoke: s Macknade Viscount (P.I. 29299), d Aldingbourne Columbine (50142), s d Kingswood Ace of Diamonds.

**III. (£2).**—**WILLIAM TURNER**, Offerton, Hindlip, Worcester, **Hache Bravery** (25863), born 11th September, 1924, bred by Hache Herd, Nuntham Court, Findon, Sussex: s Hache Cerjan Ulysses (P.I. 14165), d Hache Akkar Virtue (53082), s d Clackhouse King Akrin (P.I.).

**CLASS 87.**—*British Friesian Bull, calved in 1929.* [1 entry.]

**I. (£10).**—**MRS. P. TORY**, Shapwick, Blandford, Dorset, **Crawford Beatty's Victor**, born 4th March: s Crawford (imported 1922) Beatty 6th (19689), d Penthurst Generosity (26020), s d Brookside Buttercup's Brand (3593).

## ABERDEEN-ANGUS.

(£18 towards the Prizes in the Aberdeen-Angus Classes were given by the English Aberdeen-Angus Cattle Association)

**CLASS 88.**—*Aberdeen-Angus Cow or Heifer, in-Milk, calved before 1st December, 1927.* [4 entries.] 1, 2, 3, 4

**I. (£10)** and Champions\*†—**Col. C. W. SOFER WHITBURN**, Amport St. Marys, Andover, Hants, **Idella of Amport** (88901), born 11th January, 1927: s Eski of Doonholm (56860), d Princess Ida of Amport (80106), s d Earl of Surrey (43238). (Last calf 8th January, 1930).

**II. (£5.)** **ERNEST RIDLEY DEBENHAM**, Bladen Farms, Briantspuddle, Dorchester, Dorset, **Ermine 3rd of Ruthven** (84448), born 2nd February, 1927, bred by D. Macrae, Ruthven, Kingussie, Scotland: s Premier of Candacraig (55561), d Ernie of Ruthven (56737), s d Earl Echo of Ballindalloch (26706). (Last calf, 26th October, 1929).

**III. (£2.)** **Colonel RAYMOND FFENNELLS**, Wytham Abbey Estate, Oxford, **Prude of Witley** (78961), born 8th March, 1925, bred by Sir John Leigh, Bart., Witley, Surrey: s Kodak of Gallovie (48575), d Prudent of Theobalds (65328), s d Fair Boy of Theobalds (41584). (Last calf 14th December, 1929).

**R.**—**VISCOUNT FALMOUTH**, Tregothnan, Truro, **Camella of Tregothnan**, born 27th February, 1927: s Enthusiast 2nd of Lethen, d Barbosa, s d Dandaleith Buresco. (Last calf 26th February, 1930).

**CLASS 89.**—*Aberdeen-Angus Heifer, calved on or between 1st December, 1927 and 30th November, 1928.* [4 entries.]

**I. (£10.)**—**Col. C. W. SOFER WHITBURN**, Amport St. Marys, Andover, Hants, **Peerless Ida of Amport** (88908), born 17th March, 1928: s Proud Baladan of The Burn (62756), d Golden Ida of Amport (85695), s d Euryalus of Ballandalloch (48123).

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† Silver Medal for the Best Bull in the British Friesian Classes.

\* Given by the Aberdeen-Angus Cattle Society, a Silver Medal for the Best Animal in the Aberdeen-Angus Classes.

‡ Given by the English Aberdeen-Angus Cattle Association, a Silver Medal for the Best Exhibit bred in England or Wales.

**II. (£5.)**—E. KEITH BROOKS, Coombe Farm, Thatcham, Berks, **Miss Beningborough** (E.T.W.A. 6, 86684), born 27th January, 1928, bred by W. T. Elgey, Bell Farm, Benningborough, York; s Geordie of Goodwood (48285), d Betty Maria (61655), s d Emperor of Harviestoun (39401).

**III. (£2.)**—H.R.H. THE PRINCE OF WALES, K.G., Bellever Farm, Princetown, Devon, **Beta of Bellever**, (85850), born 21st January, 1928; s Prince Proudfoot (55661), d Boitica of Doonholm (69849), s d Ebelum of Ballindalloch (43249).

**R.**—VISCOUNT FALMOUTH, Tregothnan, Truro, **Jipsey Queen of Tregothnan**, born 31st December, 1927; s Village Laddie of Tregothnan, d Jipsey Ruthella s d Village Barman.

CLASS 90.—*Aberdeen-Angus Heifer, calved on or after 1st December, 1928.* [8 entries.]

**I. (£10.)**—J. J. CRIDLAN, Maisemore Park, Gloucester, **Blackbird 22nd of Maisemore** (89763), born 19th March, 1929; s Prince Eric 5th of Maisemore (60185), d Blackbird 14th of Maisemore (64318), s s Idyll of Maisemore (36219).

**II. (£5.)**—ERNEST RIDLEY DEBENHAM, Bladen Farms, Briantspuddle, Dorchester, Dorset, **Griselda 2nd of Bladen** (89854), born 11th March, 1930; s Borodin of Candacraig (63511), d Griselda of Mongo's Walls (82267), s d Patron of Bywell (55449).

**III. (£2.)**—H.R.H. THE PRINCE OF WALES, K.G., Bellever Farm, Princetown, Devon, **Witch 17th of Dartmoor** (89102), born 13th February, 1929; s Prince Proudfoot (55661), d Witch 6th of Dartmoor (63819), s d Jellicoe of Advie (38055).

**R.**—Col. C. W. SOFER WHITBURN, Amport St. Marys, Andover, Hants, **Estelle of Amport** (92165), born 31st January, 1929; s Proud Baladan of The Burn (62756), d Eulogy of Harviestoun (58608), s d Electric Bell (29104). (Last calf 15th January, 1930).

**H.C.**—E. KEITH BROOKS, Coombe Farm, Thatcham, Berks, **Black Myra** (92116, W.A.M., B.5), born 1st January, 1929, bred by Ainslie Watson, Whorlton, Barnard Castle, Durham; s Euryalus of Ballindalloch (48123), d Black Moyna (73107), s d Black Jachto of Ballindalloch (40874).

CLASS 91.—*Aberdeen-Angus Bull, calved before 1st December, 1928.* [9 entries.]

**I. £10** and **Champion†** and **R. for Champions\*†**—J. J. CRIDLAN, Maisemore Park, Gloucester, **Prince Eric 5th of Maisemore** (60185), born 11th December, 1924; s Eric 2nd of Maisemore (43525), d Pride of Maisemore 22nd (69158), s d George R. of Ballindalloch (30611).

**II. (£5)** and **R. for Champion†**—VISCOUNT FALMOUTH, Tregothnan, Truro, **Vain Vicar**, born 4th March, 1924, bred by Arch Whyte, Spott, Kirriemuir; s Hayston Bonus, d Vineyard Euro, s d Euro of Ballindalloch.

† Given by the English Aberdeen-Angus Cattle Association, a Silver Medal for the Best Animal of opposite sex to that of the Champion.

\* Given by the Aberdeen-Angus Cattle Society, a Silver Medal for the Best Animal in the Aberdeen-Angus Classes.

† Given by the English Aberdeen-Angus Cattle Association, a Silver Medal for the Best Exhibit bred in England or Wales.

## xxxvi Prizes awarded to Aberdeen-Angus and Red Poll Cattle.

**III. (£2).**—Colonel RAYMOND FFENNELL, Wytham Abbey Estate, Oxford, **Black Brutus of Llantwit** (63386), born 21st January, 1927; bred by F. H. Turnbull, Llantwit, near Cardiff; s Franksome (53401), d Black Bara (70968), s d Evendale of Bleaton (48139).

**R.**—Col. C. W. SOFER WHITBURN, Amport St. Marys, Andover, Hants, **Proud Baladan of The Burn** (62756), born 24th January, 1926, bred by G. H. Russell, The Burn, Edgell; s Everil of Bandalloch (52678), d Pride of Balgean (74173), s d Jorum (43920).

**H.C.**—PORT ELIOT ESTATE (Mr. John Nailson), St. Germans, Cornwall, **Black George of Beningbrough** (E.T.W., A.3), born 19th December, 1927, bred by W. T. Elgey, Driffild, East Yorkshire; s Geordie of Goodwood (48285), d Behemia (69847), s d Jestyn of Langshott (43897).

**CLASS 92.**—*Aberdeen-Angus Bull, calved on or after 1st December, 1928.* [5 entries.]

**I. (£10).**—VISCOUNT FALMOUTH, Tregothnan, Truro, **Emblem of Tregothnan**, born 1st December, 1928; s Vain Vicar, d Elizabeth 31st of Fasque, s d Racket of Banks.

**II. (£5).**—Col. C. W. SOFER WHITBURN, Amport St. Marys, Andover, Hants, **Adjutant of Leylodge** (69182), born 31st December, 1928, bred by G. Abel, East Ley Lodge, Kintore; s Mastertouch (53168), d Jane of Ingatestone (61925), s d Effendi of Freeland (37537).

**III. (£2).**—Colonel RAYMOND FFENNELL, Wytham Abbey Estate, Oxford, **Wytham Proud Brutus** (72427), born 6th January, 1929; s Black Brutus of Llantwit (63386), d Prude of Witley (78961), s d Kodak of Gallovie (48575).

**R.**—J. J. CRIDLAN, Maisemore Park, Gloucester, **Priderie 2nd of Maisemore** (71843), born 15th December, 1928; s Proud Eric of Maisemore (57939), d Pride of Maisemore 27th (78290), s d Evader of Harviestoun (52626).

**H.C.**—ERNEST RIDLEY DEBENHAM, Bladen Farms, Briantspuddle, Dorchester, Dorset, **Glenafton 2nd of Bladen** (entered for next Vol.), born 28th March, 1929; s Glenafton (64574), d Beautiful Maid 7th (81228), s d Eleon of Garyvault (47827).

## RED POLL.

(£20 towards the Prizes in the Red Poll Classes and the Silver Medals were given by the Red Poll Cattle Society).

**CLASS 93.**—*Red Poll Cow or Heifer, in-Milk, calved before 1928.* [6 entries.]

**I. (£10) and Silver Medal\***—Mrs. M. M. FITZGERALD, Marsden Manor, Cirencester, **Marsden Mimulus** (37998), born 4th July, 1926; s Marsden Mars (13501), d Marsden Musk Rose (32899), s d Antwick Russett King (12203). (Last calf 2nd February, 1930).

**II. (£5) and R. for Silver Medal\***—The Right Hon. VISCOUNT FOLKESTONE, Longford Estate Office, Alderbury, **Longford Bloom**, born 23rd January, 1924; s Sudbourne Choice Goods, d Dallinghoo Blossom 3rd, s d Gressenhall Taurus. (Last calf 2nd January, 1930).

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\* Silver Medal for the Best Cow or Heifer in the Red Poll Classes.

**III. (£2.)**—A. PRESTON JONES, Mickleover House, Derby, **Gaddesby Ducky**, born 30th January, 1924, bred by Capt. J. O. Sherrard, Gaddesby Hall, Leicestershire; s Sudbourne Loyalist, d Necton Darling, s d Sudbourne Croesus. (Last calf 21st January, 1929).

**R.**—JOHN GEORGE GRAY, Rosehill, Coventry, **Whiteway Welcome** (35050), born 7th November, 1924; s Necton Gloucester (11423), d Ashmore Beatitude (28447), s d Ashmore Count (11244). (Last calf 14th February, 1930).

**H.C.**—Ditto, ditto, **Springhill-Artless** (31739), born 29th January, 1922, bred by Liet.-Col. E. D. Millar, near Rugby; s Ashmore Carnation (11858), d Ashmore Artist (26614), s d Potsherd (11189).

CLASS 94.—*Red Poll Heifer, calved in 1928.* [2 entries.]

**I. (£10.)**—Mrs. C. N. DYER, Hyders, Crawley, Sussex, **Horsley Colonia** (41548), born 28th May, bred by Right Hon. Lord Wavertree, Horsley, Cheshire; s Colworth Nelson (13700), d Nerton Enid 2nd (30252), s d Sudbourne Croesus (10927).

**II. (£5.)**—Lt.-Col. R. C. BATT, C.B.E., M.V.O., Gresham Hall, Norwich, **Gresham Geisha Girl**, born 26th February; s Basildon Royal (11882), d Gresham Saucy Girl (28800), s d Shrowston Spartacus (11482).

CLASS 95.—*Red Poll Heifer, calved in 1929.* [7 entries.]

**I. (£10.)**—VISCOUNT TREDEGAR, Tredegar Park, Newport, Mon., **Tredegar Gueldor Rose**, born 26th March; s Tredegar Dauphine (14343), d Tredegar Blush Rose (34946), s d Ferrymore Flycatcher (12604).

**II. (£5.)**—Mrs. M. M. FITZGERALD, Marsden Manor, Cirencester, **Marsden Modiste**, born 20th February; s Marsden Mintine (13861), d Marsden Mirror (37999), s d Gressenhall Rosebloom's Hero (12311).

**III. (£2.)** A. PRESTON JONES, Mickleover House, Derby, **Mickleover Red Lena**, born 26th January; s Gaddesby Edward, d Red Lena, s d Sudbourne Chevalier.

**R.**—VISCOUNT TREDEGAR, Tredegar Park, Newport, Mon., **Tredegar Guitar**, born 11th March; s Tredegar Dauphine (14343), d Finborough Fife (28724), s d Marham Fireman (11171).

**H.C.**—Mrs. MAUD HAMILTON DYER, Hyders, Crawley, Sussex, **Horsley Rosalind** (Vol. 47), born 16th March, bred by Lord Wavertree, Horsley, Cheshire; s Ashmoor Alert (13284), d Hardwick Rosetti (32565), s d Hatton Fabian (11677).

CLASS 96.—*Red Poll Bull, calved in or before 1928.* [4 entries.]

**I. (£10) and Silver Medal†**—A. PRESTON JONES, Mickleover House, Derby, **Gaddesby Edward**, born 18th August, 1926, bred by Capt. J. O. Sherrard, Gaddesby Hall, Leicestershire; s Sudbourne Loyalist, d Necton Elderflower, s d Shrewsbury.

**II. (£5.)**—H. TAYLOR, Lower Tundridge, Suckley, Worcester, **Byley Hero** (14060), born 29th January, 1924, bred by Col. H. M. Stephenson, Byley Pedigree Stock Farm, Byley, Cheshire; s Combs Heroic (11912), d Model Fanny (26395), s d Sutton Demoniac (10934).

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† Silver Medal for the Best Bull in the Red Poll Classes.

xxxviii *Prizes awarded to Red Poll and Ayrshire Cattle.*

**III. (£2).**—Mrs. MAUD HAMILTON DYER, Hyders, Crawley, Sussex, **Ashmoor Alert** (13284), born 20th March, 1923, bred by A. Carlyle Smith, Woodbridge, Suffolk; s Davyson 363rd (11926), d Ashmoor Vi (25448), s d Emperor (10410).

CLASS 97.—*Red Poll Bull, calved in 1929.* [4 entries.]

**I. (£10)** and R. for Silver Medal† **VISCOUNT TREDEGAR**, Tredegar Park, Newport, Mon., **Tredegar General**, born 1st January; s Tredegar Dauphin (14343), d Tredegar Beatrice (34940), s d Colworth South Pole (12253).

**II. (£5.)** JOHN GEORGE GRAY, Rosehill, Coventry, **Abbeycombe Esparto**, born 8th January; s Abbeycombe Bixa, d Upton Susan (38586), s d Hatton Fabulist.

**III. (£2.)** -Lt.-Col. R. C. BATT, C.B.E., M.V.O., Gresham Hall, Norwich, **Gresham Mohawk**, born 1st March; s Bredfield Darins 2nd (12942), d Gresham Mayfly (34018), s d Basildon Royal (11882).

## AYRSHIRE.

(£20 towards the Prizes in the Ayrshire Classes and the Gold Medal were given by the English Committee of the Ayrshire Cattle Herd Book Society, and animals entered must have been registered or eligible for registration in the Society's Herd Book)

CLASS 98.—*Ayrshire Cow, in-Milk, calved before September 1, 1926.* [7 entries.]

**I. (£10)** and Gold Medal\*—**CLEMENT E. TORY**, Higher Burton House, Dorchester, white and brown, **Eglinton Juno** (95438), born 30th October, 1923, bred by Earl of Eglinton and Winton, Tonbridge, Kent; s Eglinton Mains Snow King (19734), d Eglinton Mains Midsummer (80963), s d Howie's Hot Stuff (17895) (Last calf 27th April, 1930).

**II. (£5.)**—THE NATIONAL SOCIETY FOR EPILEPTICS, Chalfont Colony, Chalfont St. Peter, Bucks, white, brown cheeks, **Rainton Alice 5th** (84064), born 12th March, 1922, bred by the late W. T. Sproat, Rainton, Gatehouse, N.B.; s Rainton Leader (19136), d Rainton Alice 2nd (72185), s d Carlestone Marvel (15080).

**III. (£2.)**—**CLEMENT E. TORY**, Higher Burton House, Dorchester, white and brown, **Catlinns Mayflower 2nd** (95682), born 28th October, 1923, bred by W. L. Fergusson, Catlinns, Lockerbie; s Catlinns Dreadnought (19148), d Hill Princess 2nd (A. 3241). (Last calf 19th April, 1930).

**V.H.C.**—H. J. CLARK, Oldner House, Chipping Norton, Oxon, white, with a little brown, **Oldner Cherry Blossom** (8946), born 11th November, 1925; s Rigg Jupiter (19483), d Smithson Cherry Blossom (91351), s d Smithson Sunstar (21857).

**H.C.**—WILLIAM B. DUNSFIELD, Wilmcote Hill, Stratford-on-Avon, brown and white, **High Tarbey Dot 2nd** (98975), born 10th March, 1924, bred by J. A. Watson; s Meckle Kelmony Lord (23499), d High Tarbey Dot (60708), s d High Tarbey Kitchener (15645). (Last calf 17th March, 1930).

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† Silver Medal for the Best Bull in the Red Poll Classes.

\* Gold Medal for the Best Animal in the Ayrshire Classes.

CLASS 99. — *Ayrshire Heifer, in-Milk, calved on or after September 1, 1926.* [3 entries.]

**I. (£10)** and R for Gold Medal\* **H J CLARK**, Oldner House, Chipping Norton, Oxon, white, with few brown spots, **Oldner Amorla** (13169), born 29th March, 1927, s Ickham Mascot (24352), d Moorside Amorla (90902), s d Bonnie Knowl Snowball (17570) (Last calf 23rd March, 1930)

**II. (£5).**—THE NATIONAL SOCIETY FOR EPILEPTICS, Chalfont Colony, Chalfont St Peter, Bucks, white, **Hightae Lily 15th** (21344), born 27th September, 1927, bred by Thomas White, Hightae Castle, Douglas, N B, s Auchenbainzie Royal Review (24808), d Hightae Lily 7th (941), s d Hightae Commander (24076)

**V.H.C.** **WILLIAM B DUNSFIELD**, Wilmcote Hill, Stratford-on-Avon, white and brown, **Mains of Airies Kate 18th** (13368), born January, 1927, bred by R Paton, s Auchenbroien Special Blend (16950), d Mains of Airies Kate 8th (80795) (Last calf 2nd January, 1930)

CLASS 100. — *Ayrshire Heifer, calved on or after September 1, 1928* [4 entries]

**I. (£10.)** **H J CLARK**, Oldner House, Chipping Norton, Oxon, white and brown, **Oldner Trim 2nd** (22786), born 8th October, 1928, s Carnell Specialist (26471), d Baryerock Tim (511), s d Baryerock Jamie (24818)

**II. (£5).** THE NATIONAL SOCIETY FOR EPILEPTICS, Chalfont Colony, Chalfont St Peter, Bucks, white and little brown, **Chalfont Topsy**, born 12th December, 1928, s Mackays Foundation Stone (27899), d Bruchag Topsy 16th (4320), s d Nether-ton Bona Fide (19557)

**V.H.C.** **G ELLIOT SEALY**, Ryngmer Park, Lewes, Sussex, white, brown cheek and ears, **Rosegate Juliet** (22831), born 14th November, 1928, s Chapmanton Martinet (24460), d Langbarns Kitty 7th (9763), s d Chapmanton Litigant (23558)

**H.C.** Ditto, ditto, white and brown, **Rosegate Jessica** (22819), born 7th November, 1928, s Chapelhill Standfast (19988), d Chapelton Gay Lass 6th (6881), s d Balmangan Forecast (22418)

CLASS 101. — *Ayrshire Bull, calved on or after September 1, 1928.* [2 entries]

**I. (£10.)**—THE NATIONAL SOCIETY FOR EPILEPTICS, Chalfont Colony, Chalfont St Peter, Bucks, brown and white, **Midtown Baldwin**, born 25th November, 1928, bred by John Weir, Midtown, New Abbey Road, Dumfries; s Dalfibble Rentpayer (25926), d Midtown Lady Mary (769), s d Caigton New Moon (23547).

**V.H.C.**—**CLEMENT E. TORY**, Higher Burton House, Dorchester, white and brown, **Muston Gold Dust**, born 25th October, 1928; s Oldner Primary (25749), d Broadhead Gipsy 2nd (10291), s d Lessnessock Tullamore (18361).

\* Gold Medal for the Best Animal in the Ayrshire Classes.



## JERSEY.

(£10 towards the Prizes in the Jersey Classes were given by the English Jersey Cattle Society).

CLASS 102.—*Jersey Cow, in-Milk, calved before 1927.* [9 entries.]

**I. (£10).**—Mrs. EVELYN, Wotton House, Dorking, whole, **Wotton Psamead**, born 5th June, 1926 ; s Charm of War (15279), d Sand Princess, s d Wotton Sandstorm (14503).

**II. (£5).**—Ditto, ditto, whole, **Coppia War Rosette**, born 26th March, 1926, bred by Lord Phillimore, Henley-on-Thames ; s Charm of War (15279), d Sand Rosette (5589), s d Wotton Sandstorm.

**III. (£2).**—Sir HAROLD MACKINTOSH, Conyngham Hall, Knaresborough, whole, **Bradley's Oxford Lilian 3rd**, born 17th December, 1926, bred by Duke of Somerset ; s Roundway Boaz, d Bradley's Oxford Lilian 2nd, s d Dandy.

**R.**—Capt. F. B. IMBERT TERRY, M.C., Blue Hayes, Broad C'lyst, Devon, whole, **Blue Hayes White Label** (5998), born 23rd January, 1925 ; s Hunstrete Tuneful Lad (14322), d Blue Hayes Whisky (Vol. 33, Page 75), s d Pro Bacchus (13085). (Last calf 6th December, 1929).

**H.C.**—Ditto, ditto, whole, **Blue Hayes Bannock** (1520), born 19th August, 1922 ; s Pro Bacchus (13085), d Blue Hayes Baff (Vol. 32, Page 75), s d Hotspur (12657). (Last calf 25th February, 1930).

CLASS 103.—*Jersey Cow or Heifer, in-Milk, calved in 1927.* [3 entries.]

**I. (£10).**—CORTLANDT TAYLOR, Platt House Farm, Wrotham, Kent, broken, **Fairseat Favorita**, born 18th February ; s Mantle's Favorite (15063), d Broadlands Favorite 2nd (4477), s d Xenia's Sultan (13798).

**II. (£5).**—Mrs. EVELYN, Wotton House, Dorking, whole, **French Star**, born 7th February, bred by P. L. Gregson ; s Light Lord (15579), d Dunkerque, s d Jersey Volunteer. (Last calf 13th January, 1930).

**R.**—Miss R. B. BABCOCK, Shawlands, Lingfield, Surrey, whole, **Dreamers Princess**, born 5th February, bred by C. A. Poignand, St. Lawrence, Jersey ; s Watfarns Dreamer (6090), d Moneylenders Princess (29593), s d Moneylender (5654).

CLASS 104.—*Jersey Heifer, in-Milk, calved in or since 1928.* [2 entries.]

**I. (£10).**—Sir HAROLD MACKINTOSH, Conyngham Hall, Knaresborough, whole, **Conyngham's Snowdrop**, born 1st February, 1928 ; s St. Louis, d Lydia, s d Cowdray Dairyman. (Last calf 1st April, 1930).

**II. (£5).**—Miss R. B. BABCOCK, Shawlands, Lingfield, Surrey, whole, **Hook Juanita**, born 19th April, 1928, bred by Mrs. E. K. Staines, Hook Farm, Leigh, Surrey ; s Culverden Pet (15621), d Roseland Pedros Juanita (5559), s d Pedro (14733).

CLASS 105.—*Jersey Bull, calved before 1928.* [2 entries.]

**I. (£10.)**—CORTLANDT TAYLOR, Platt House Farm, Wrotham, Kent, whole, **Fairseat Favorite** (15978), born 24th August, 1926; s Mantle's Favorite (15063), d Goddington Lady Aldan 4th (Vol. 30, Page 286), s d Pioneer's Noble (12416).

**II. (£5.)**—JOSEPH HERBERT BERRY, Secmaton, Dawlish, Devon, broken, **Raspberry's Boy**, born 4th May, 1927, bred by the Hon. Mrs. Murray Smith, Gumly Hall, Market Harborough; s Post Boy (14896), d Raspberry 2nd (8309), s d Roscius (12131).

CLASS 106.—*Jersey Bull, calved in 1928.* [2 entries.]

**I. (£10.)**—Mrs. EVELYN, Wotton House, Dorking, **Bright Eyes Sweep**, born 28th June, bred by A. W. Ruggles Brise, Braintree; s Lingen Sweep Time (15523), d Bright Eyes Hussy, s d Lord Capsicum.

**II. (£5.)**—Capt. F. B. IMBERT TERRY, M.C., Blue Hayes, Broadclyst, Devon, whole, dash, **Spring V.C.**, born 27th June, bred by C. W. Hough, Springhouse Farms, Theydon Bois, Essex; s Lilac's Golden Cid (15521), d Origa's Velve (3821), s d Origa's Oxford Raleigh (14720).

CLASS 107.—*Jersey Bull, calved in 1929.* [4 entries.]

**I. (£10.)**—Mrs. EVELYN, Wotton House, Dorking, whole, **Wotton Sandpole**, born 24th May; s Wotton Maypole, d Wotton Sandmaiden, s d Wotton Sandy.

**II. (£5.)**—CORTLANDT TAYLOR, Platt House Farm, Wrotham, Kent, whole, **Fairseat Faultless**, born 25th March; s Gloxalia's Blue Boy (15656), d Nobody's Pet (2355), s d War Bread (13785).

**R.**—Sir HAROLD MACKINTOSH, Conyngham Hall, Knaresborough, whole, **Emperor Louis**, born 7th February, bred by Lady Estella Hope, South Park, Bodium, Sussex; s Purple Emperor (16066), d Jeanette (2056), s d Excelesden Peter (13556).

## GUERNSEY.

(£20 towards the Prizes in the Guernsey Classes were given by the English Guernsey Cattle Society).

CLASS 108.—*Guernsey Cow, in-Milk, calved before 1927.* [12 entries.]

**I. (£10.)**—GEORGE BLIGHT, Tregonning, Breage, Helston, yellow and white, **Rosewarne Buttercup** (18294), born 23rd January, 1922, bred by J. M. Holman, Rosewarne, Camborne; s Tregonning Field Marshal (4054), d Rosewarne Dorothy 2nd (13853), s d Ladock Prince (2995). (Last calf 1st May, 1929).

**II. (£5.)**—WILLIAM THOMAS SOBEY, Penwartha, Perranporth, Cornwall, fawn and white, **Prudence of Perranzabuloe** (22547), born 31st May, 1925, bred by Mrs. Vosper, Mount, Perranporth, Cornwall; s Mithian Governor (5100), d Bosisto Minette (16183), s d Lands End Prince (3742). (Last calf April 24th, 1930).

**III. (£2.)**—W. ROACH, Trewidden Farm, Penzance, lemon and white, **Bests Beauty** (23275), born 15th July, 1924, bred by A. Best, Sunnyside, St. Peter's; s Cyrene's Lad Rourets, d Bests Bickleigh Queen, s d Bickleigh Queen 4th.

**R.**—WALTER PENROSE, Trewavas Farm, Breage, Helston, Cornwall, lemon and white, **Trewavas Blaze**, born 21st October, 1924; s Tregonning Field Marshal (4054), d Bochny Blaze (17351).

**V.H.C.**—MRS. YORKE, Peter's Farm, Sandy Lane, near Chippenham, Wiltshire, fawn and white, **Vern Maggie** (24768), born 24th September, 1925, bred by J. Nicolle, Baissieres Place, St. Andrews, Guernsey; s Sequels Attorney (4561 P.S.), d Maggie 8th of Blaye Farm (P.S. 237070), s d Pearls Star (P.S. 259). (Last calf 4th March, 1930).

**H.C.**—MRS. J. SUTCLIFFE PYMAN, Norsebury, Sutton Scotney, Hants, fawn and little white, **Sheba 2nd of Pine Grove** (29223), born 5th August, 1923, bred by L. du Heaune, Fiers Montous, St. Andrews, Guernsey; s May Boy of Beaulieu (4300), d Sheba of Pine Grove (21619), s d Sequels Lodestar (4131).

**C.**—ERIC H. ROSE, Leweston Manor, Sherborne, fawn and white, **Lady Easter of La Rue** (E.G.H.B. 29320), born 18th April, 1922, bred by A. W. F. Hoffman, Sark; s Sam of Le Font (R.G.A.S. 4489), d Lady Charlotte of Grand Dixcart (R.G.A.S. 10016), s d Defencer (R.G.A.S. 2152). (Last calf 26th March, 1930).

CLASS 109.—*Guernsey Heifer, in-Milk, calved in 1927.* [6 entries.]

**I. (£10.)**—ERIC H. ROSE, Leweston Manor, Sherborne, fawn and white, **Wytham Rosey 2nd** (E.G.H.B. 75878), born 9th March; s Eldfordleigh Hammill (E.G.H.B. 4185), d Rosey of Goodnestone 11th (E.G.H.B. 16953), s d Slogan de Bon Espoir (4317). (Last calf 14th May, 1929).

**II. (£5.)**—MRS. J. SUTCLIFFE PYMAN, Norsebury, Sutton Scotney, Hants, fawn and little white, **Rosey of Goodnestone 33rd** (25809), born 8th February, bred by Lord Fitzwalter, Goodnestone, Canterbury, Kent; s Claras Lad of Kings Mills (6020), d Rosey of Goodnestone 22nd (20243), s d Sequels Slogan 2nd (4311).

**III. (£2.)**—WILLIAM PENROSE, Trequean, Breage, Helston, Cornwall, **Trequean Nellie 20th**, born 3rd August; s Trewavas Prince (6194), d Trequean Nellie 13th (20666).

**R.**—W. ROACH, Trewidden Farm, Penzance, lemon, **Trewidden Cissy 2nd** (25864), born 25th March; s Rockbeare Peerless 2nd, d Cyrene's Cissy of the Spurs, s d Cissy's Jewell.

**V.H.C.**—WALTER PENROSE, Trewavas Farm, Breage, Helston, Cornwall, fawn and little white, **Trewavas Jeanette 6th** (27519), born 11th February; s Ashfield Golden Hope (4676), d Trequean Jeanette 2nd (13151).

CLASS 110.—*Guernsey Heifer, calved in 1928.* [8 entries.]

**I. (£10.)**—W. DUNKELS, Fernhill Park, Windsor Forest, Berks, fawn and white, **Fernhill Rose 2nd** (28077), born 28th March; s Hindhead Robert 6th (5847), d Fernhill Rose (18813), s d Murrell Desmond (4263).

**II. (£5.)**—WILLIAM PENROSE, Trequean, Breage, Helston, Cornwall, fawn and white, **Trequean Reality 13th** (28219), born 27th March; s Elfordleigh Hammill 3rd (5783), d Trequean Reality 10th (22206).

**III. (£2.)**—W. A. ARGENT, Rusper, Horsham, Sussex, fawn and white, **Dairymaid of Rusper** (28130), born 3rd April; s Lynchmere Lord Roberts 20th, d Dairymaid of Alderney 6th, s d Favourite 2nd of the Barras.

**R.**—Lt.-Col. H. J. STIBBARD, O.B.E., Army Vocational Training Centre, Chiseldon Camp, Wilts, fawn and white, **Scotton Primrose**, born 14th March; s Hornblotton Refiner (5729), d Primrose of the Glen (19425, imported), s d Noble Boy of Myrtle Place (4558).

**C.**—Mrs. V. C. BRADSHAW, Bystock, near Exmouth, fawn and white, **Merton Butterprint** (27070), born 2nd September, bred by C. C. Empeonen, Rectory Farm, Borough Green, Newmarket, Cambs.; s Merton Sequel's Jolly (6452), d Calehill Butterprint (24373), s d Calehill Ivor.

CLASS 111. — *Guernsey Heifer, calved in 1929.* [11 entries.]

**I. (£10.)**—W. DUNKELS, Fernhill Park, Windsor Forest, Berks, fawn and white, **Fernhill Victorine 6th** (30362), born 27th February; s Hindhead Robert 6th (5847), d Victorine of Milestone (18518), s d Baince's Victor (P.S. 4184).

**II. (£5.)**—Ditto, ditto, fawn and white, **Fernhill Primrose 5th** (30751), born 21st April; s Hindhead Robert 6th (5847), d Fernhill Primrose 3rd (18812), s d Rose Lad of Goodnestone (3163).

**III. (£2.)**—ERIC H. ROSE, Leweston Manor, Sherborne, fawn and white, **Leweston Princess Mary 3rd** (E.G.H.B. 30546), born 14th March; s Ely Fannys Lad (E.G.H.B. 6576), d Whytham Princess Mary 2nd (E.G.H.B. 25261), s d Eldfordleigh Hammill (E.G.H.B. 4185).

**R.**—GEORGE BLIGHT, Tregonning, Breage, Helston, Cornwall, yellow and white, **Bellhurst Aubepine 3rd** (31469), born 5th August, bred by Messrs. F. Strickland & Sons, Sussex; s Bellhurst Cornishman (6531), d Bellhurst Aubepine (21059), s d Lynchmere Lord Roberts 17th (4537).

**V.H.C.**—W. ROACH, Trewidden Farm, Penzance, **Trewidden Favourite 8th** (31283), born 28th April; s Poltimore Trojan, d Favourite of Sunnyside.

**H.C.**—Ditto, ditto, lemon, **Trewidden Gladiolas 6th** (30913), born 28th May; s Poltimore Trojan, d Trewidden Gladiolas.

**C.**—Sir ERIC HAMBRO, K.B.E., Milton Abbey, Blandford, Dorset, fawn and white, **Milton Lady Cecelia 6th** (31033), born 17th June; s Fernhill Rose Lad (H.B. 6432), d Milton Lady Cecelia 2nd (H.B. 24299), s d Downe Valentino Honour of Vimirea (H.B. 3913, A.R.). —Ditto, ditto, fawn and white, **Milton Ivy 4th** (30932), born 4th June; s Milton Star 2nd (6905), d Milton Ivy 2nd (26535), s d Hayes Goldfinder 2nd (5788).—WILLIAM PENROSE, Trequean, Breage, Helston, Cornwall, **Trequean Flora 3rd**, born 29th June; s Trequean Dary King (6880), d Trequean Primrose 21st (21071).

CLASS 112.—*Guernsey Bull, calved in 1926 or 1927.* [8 entries.]

**I. (£10.)**—W. DUNKELS, Fernhill Park, Windsor Forest, Berks, fawn and white, **Fernhill Rose Lad 3rd** (6860), born 20th May, 1927; s Rose Lad of Goodnestone (3163), d Downe Fleur of Vimiera (14281), s d Valentines Honour of the Passee (P.S. 3826).

**II. (£5.)**—Sir ERIC HAMBRO, K.B.E., Milton Abbey, Blandford, Dorset, fawn and white, **Fernhill Rose Lad** (6432), born 26th June, 1926, bred by Walter Dunkels, Fernhill Park, Berks; s Rose Lad of Goodnestone (3163, A.R. 32), d Downe Fleur of Vimiera (14281, A.R. Eng.), s d Valentines Honour of the Passee (3826, A.R. 8).

**III. (£2.)**—W. ROACH, Trewidden Farm, Penzance, **Halwyn Majesty** (6372), born 27th April, 1926; s Trewidden Magnet, d Gweek May Girl 2nd.

**R.**—E. HOSKING, junr., Pulsack, Hayle, Cornwall, orange and white, **Netherleigh Sailor Boy**, born 8th February, 1927, bred by E. Jenkins, Netherleigh, Hayle; s Sailor Lad of the Palatterie (4598 R.S.), d Netherleigh Daisy (19580), s d Paddington Toreador (4296).

**V.H.C.**—Mrs. J. SUTCLIFFE PYMAN, Norsebury, Sutton Scotney, Hants, fawn, little white, **Norsebury Noel** (6875), born 28th May, 1927; s Woodlands Noel (5718), d Rosey of Goodnestone 25th (21839), s d Rose Lad of Goodnestone (3163).

**H.C.**—ERIC H. ROSE, Leweston Manor, Sherborne, fawn, **Drum Major 2nd of the Casrouge** (E.G.H.B. 7771), born 29th June, 1927, bred by A. W. V. Young, Le Casrouge, Forest, Guernsey; s Major of Le Casrouge (R.G.A.S. 4916), d Blanche Roegue Brilliants (R.G.A.S. 23764), s d Rex of Myrtle Place (R.G.A.S. (4523).

**C.**—Mrs. DORIS S. L. VERSCHOYLE, Brookhill, Wokingham, fawn and white, **Harvester of St. Leddards** (imported, 7618), born 23rd August, 1927, bred by E. J. de Garis, Castel, Guernsey, C.I.; s Echo of Myrtle Place (P.S. 4796, A.R.), d La Fleur de Jardins Ena (P.S. 20681, A.R. 711), s d Queens Fancy (P.S. 4038, A.R. 84).

#### CLASS 113.—*Guernsey Bull, calved in 1928.* [5 entries.]

**I. (£10.)**—E. R. DEBENHAM, Bladen Farms, Briantspuddle, Dorchester, Dorset, fawn and white, **Milton Rose Lad** (7330), born 12th June, bred by Sir Eric Hambro, K.B.E., Milton Abbey, Blandford, Dorset; s Fernhill Rose Lad (6432), d Milton Rosey 5th (16764, A.R. (Eng.) 1453, 2101, 2202, 2593), s d Hayes Pride (3951, A.R. (Eng.) 37).

**II. (£5.)**—W. A. ARGENT, Rusper, Horsham, Sussex, fawn and white, **Wintergreen's Sequel of Rusper** (7143), born 29th February; s Sequel's Kismet 2nd, d Wintergreen of Goodnestone 12th, s d Rose Lad of Goodnestone.

**III. (£2.)**—WALTER PENROSE, Trewavas Farm, Breage, Helston, Cornwall, orange and white, **Trewavas Midas** (7572), born 27th November; s Eldfordleigh Midas (6262), d Trequean Hilda.

**R.**—ERIC H. ROSE, Leweston Manor, Sherborne, fawn and white, **Lynchmere Lord Roberts 22nd** (7289), born 26th May, bred by the late Mrs. Frank Pratt Barlow, Lynchmere House, Shothermill; s Lynchmere Lord Roberts 15th (E.G.H.B. 3982), d Castrorum Nellie (E.G.H.B. 22741), s d Governor of Roussaillerie (E.G.H.B. 5647).

**H.C.**—Major ALEXANDER GOULD BARRETT, Eastbrook House, near Taunton, fawn and white, **Hindhead Robert 12th** (E.G.C.S. 7163), born 18th February, bred by J. B. Body, Hindhead Court, Hindhead, Surrey; s Lynchmere Lord Roberts 15th (3982), d Joyce of the Grove (21772), s d Vanity's Ashburton 3rd.

#### CLASS 114.—*Guernsey Bull, calved in 1929.* [10 entries.]

**I. (£10.)**—W. DUNKELS, Fernhill Park, Windsor Forest, Berks, fawn and white, **Fernhill Robert 5th** (7795), born 28th April; s Hindhead Robert 6th (5847), d Downe Fleur of Vimiera (14281), s d Valentines Honour of the Passee (3826).

**II. (£5.)**—ERIC H. ROSE, Leweston Manor, Sherborne, fawn and white, **Leweston Rose Lad** (7790), born 29th April; s Fernhill Rose Lad 2nd (E.G.H.B. 6799), d Rosey of Goodnestone 11th (E.G.H.B. 16953), s d Slogan de Bon Espoir (E.G.H.B. 4517).

**III. (£2).**—Sir ERIC HAMBRO, K.B.E., Milton Abbey, Blandford, Dorset, fawn and white, **Milton Goldfinder 5th** (7862), born 16th June; s Milton Goldfinder 2nd (6780), d Milton Rosey 5th (16764 A.R.), s d Hayes Pride (3951, A.R. 37).

**R.**—W. ROACH, Trewidden Farm, Penzance, **The Manx Man** (7807), born 9th May; s Poltimore Trojan, d Trewidden Favourite 3rd.

**V.H.C.**—Mrs. J. SUTCLIFFE PYMAN, Norsebury, Sutton Scotney, Hants, fawn and little white, **Norsebury Lodestar 6th** (7884), born 6th June; s Sequels Lodestar 2nd (4932), d Hindhead Tulip (22153), s d Hindhead Governor (4842).

**H.C.**—BERRIDGE BROS., Lippiat Farm, Locking, Weston-super-Mare, fawn and white, **Poltimore Drummer Boy**, born 15th September, bred by Lord Poltimore, Court Hall, North Molton, Devon; s Candies Kettle Drum, d Granddaughter of Queen's Fancy.

**C.**—GEORGE BLIGHT, Tregonning, Breage, Helston, Cornwall, yellow and white, **Rockbeare Trident** (7786), born 22nd April, bred by Col. Follett, Rockbeare, Devon; s Poltimore Trojan 2nd, d Hornblotton Seaweed, s d Conqueror of Vimiera.—Mrs. V. C. BRADSHAW, Bystock, Exmouth, fawn and white, **Bystock Faust** (7969), born 25th June; s Poltimore Mascot (6394), d Tone Enid, s d Tregonning Victor (6069).—Capt. C. J. KANE, Kingston Russell House, Long Bredy, Dorchester, fawn and white, **Milton Rose Lad 4th** (7723) born 20th March, bred by Sir Eric Hambro, K.C.V.O., Milton Abbey, Blandford, Dorset; s Fernhill Rose Lad (6432), d Donnington Gaiety 18th (23908), s d Hindhead Governor 2nd (5038).

## DEXTER.

CLASS 115.—*Dexter Cow, of any age.* [4 entries.]

**I. (£10)** and R. for Challenge Cup\*—Mrs. C. M. L. CALVERT, Banwell Castle, Banwell, Somerset, black, **Banwell Evangeline** (3737, Vol. 27, Page 47), born 7th July, 1924; s Wightwick Paul (864), d Evangeline (3131), s d Black Jack (579).

**II. (£5).**—Miss DORA BOX, Darlingscote, Shipston-on-Stour, black, **Wightwick Dot 2nd**, born 13th May, 1926; s Bagendon Tinman (907), d Wightwick Dot, s d Oakridge Pat.

**R.**—Ditto, ditto, black, **Brokenhurst Penelope 3rd**, born 3rd April, 1922, bred by Lady Kathleen Hare, Brokenhurst Park, Hants; s Brokenhurst Morilla, d Harley Penelope. (Last calf 19th October, 1929).

**H.C.**—Ditto, ditto, black, **Wightwick Dolly 2nd**, born 2nd June, 1924; s Wightwick Prince, d Wightwick Dolly, s d Oakridge Pat (673).

CLASS 116.—*Dexter Heifer, in-Milk, born in 1927 or 1928, having had only one calf.* [3 entries.]

**I. (£10).**—Mrs. C. M. L. CALVERT, Banwell Castle, Banwell, Somerset, black, **Banwell Opaline** (4056, Vol. 29), born 8th April, 1928; s Brentmoor Bracken (874), d Hookstile Opaline (3478), s d Filongley Forester (630).

\* Given by the Dexter Cattle Society, the Devonshire Challenge Cup, for the Best Animal in the Dexter Classes bred by the Exhibitor, and entered in or eligible for the Dexter Herd Book. The Cup to be won by the same Exhibitor with different animals three years in succession before becoming his absolute property.

CLASS 117.—*Dexter Heifer, not in-Milk, calved in 1928 or 1929.*  
[5 entries.]

I. (£10) and Challenge Cup\*—HENRY G. JONES, Downford, Mayfield, Sussex, black, **Downford Dorita**, born 1st April, 1928; s Woodland Coronet (983), d Downford Doreen (3793), s d Downford Dan (827).

II. (£5).—Mrs. C. M. L. CALVERT, Banwell Castle, Banwell, Somerset, black, **Banwell Sal 3rd** (4058, Vol. 29), born 19th July, 1928; s Ratcliffe Goldsmith (976), d Attington Sal (3727), s d Speldhurst Bellows (803).

III. (£2).—HENRY G. JONES, Downford, Mayfield, Sussex, red, **Downford Rusilla**, born 22nd March, 1928; s Woodland Coronet (983), d Downford Ruby (3434), s d Downford Dandy (655).

R.—Miss DORA BOX, Darling-cote, Shipston-on-Stour, black, **Wightwick Baby 2nd**, born 13th March, 1929; s Hookstile Richard 2nd, d Wightwick Beauty 4th, s d Woodland Gadfly (984).

GIVEN BY THE DEXTER CATTLE SOCIETY.

CLASS 118. — *Dexter Bull, of any age.* [4 entries.]

I. (£10).—Mrs. C. M. L. CALVERT, Banwell Castle, Banwell, Somerset, black, **Ratcliff Goldsmith** (976, Vol. 27, Page 41), born 5th June, 1926, bred by W. Lindsay Everard, Ratcliffe Hall, Leicester; s Ratcliffe Absalom (859), d Barrow Bracelet 4th (2296), s d Barrow Bacchus (419).

II. (£3).—Miss DORA BOX, Darlingscote, Shipston-on-Stour, black, **Banwell Edgar**, born 30th April, 1928, bred by Mrs. C. M. L. Calvert, Banwell Castle, Banwell, Somerset; s Ratcliffe Goldsmith (976), d Banwell Evangeline (3737).

R.—HENRY G. JONES, Downford, Mayfield, Sussex, red, **Downford Rufus** (1037), born 1st September, 1927; s Downford David (919), d Downford Rhoda (3297), s d Downford Dandy (655).

## MILK TEST.

CLASS 119.—*Cow, in-Milk, of the Jersey, Guernsey, Kerry or Dexter breed, yielding the largest quantity of milk (at 2 or 3 Milkings under Conditions 57) showing not less than 3 per cent. Butter Fat on the average of the combined milkings.* [12 entries.]

I. (£10).—Mrs. SOFER WHITBURN, Ampport St. Marys, Andover, Hants, whole Jersey, **Graceful** (3368), born 27th November, 1922; s Palm (14074), d Gentile 8th (Vol. 29, Page 259), s d Merry Boy (11430).

II. (£5).—Capt. F. B. IMBERT TERRY, M.C., Blue Hayes, Broad Clyst, Devon, whole Jersey, **Blue Hayes Kiltie** (Vol. 31, Page 234), born 25th January, 1919, s Hotspur (12657), d Blue Hayes Scottie (Vol. 26, Page 239), s d Simpkins Chief (10446).

III. (£2).—Ditto, ditto, whole Jersey, **Blue Hayes Bannock** (1520), born 19th August, 1922; s Pro Bacchus (13085), d Blue Hayes Baff (Vol. 32, Page 75), s d Hotspur (12657).

R.—Sir HAROLD MACKINTOSH, Conyngham Hall, Knaresborough, whole Jersey, **Bradley's Oxford Lillian 3rd**, born 17th December, 1926, bred by Duke of Somerset; s Roundway Boaz, d Bradley's Oxford Lilian 2nd, s d Dandy.

\* Given by the Dexter Cattle Society, the Devonshire Challenge Cup, for the Best Animal in the Dexter Classes bred by the Exhibitor, and entered in or eligible for the Dexter Herd Book. The Cup to be won by the same Exhibitor with different animals three years in succession before becoming his absolute property.

CLASS 120.—*Cow, in-Milk, of any other breed or cross, yielding the largest quantity of milk (at 2 or 3 Milkings under Conditions 57) showing not less than 3 per cent. Butter Fat on the average of the combined milkings.* [17 entries.]

I. (£10.) and Champion\* (£5).—NORMAN D. MILLER, Buckyette, Totnes, Devon, Dairy South Devon, **Buckyette Heather** (A.L. 6858), bred by Wm. Staddon, Newton Abbot.

II. (£5.) and Reserve for Champion\*—SEALE HAYNE AGRICULTURAL COLLEGE, Newton Abbot, Dairy South Devon, **Foreman 3rd**.

III. (£2).—DARTINGTON HALL, LTD., Old Parsonage Farm, Dartington, Dairy South Devon, **Dartington Daisy 2nd** (A.L. 12431), born 1923.

R.—CLEMENT E. TORY, Higher Burton House, Dorchester, white and brown Ayrshire, **Eglinton Juno** (95438), born 30th October, 1923, bred by Earl of Eglinton and Winton, Tonbridge, Kent; s Eglinton Mains Snow King (19734), d Eglinton Mains Midsummer (80963), s d Howie's Hot Stuff (17895).

# \*CHAMPION PRIZE.

*For the Animal giving the best results in Classes 119 and 120.*

## CHALLENGE CUP.

GIVEN BY THE DEXTER CATTLE SOCIETY.

*The " Bertodano " Challenge Cup for the Dexter Cow obtaining the greatest number of points in the Milk Test Classes.*

I.—Miss DORA BOX, Darlingscote, Shipston-on-Stour, black, **Brokenhurst Penelope 3rd**, born 3rd April, 1922, bred by Lady Kathleen Hare, Brokenhurst Park, Hants; s Brokenhurst Morilla, d Harley Penelope.

R.—Ditto, ditto, black, **Wightwick Dot 2nd**, born 13th May, 1926; s Bagendon Tinman (907), d Wightwick Dot, s d Oakridge Pat.

## SPECIAL PRIZES.

GIVEN BY THE ROYAL JERSEY AGRICULTURAL SOCIETY.

*For the Jersey Cow obtaining the greatest number of points in Class 119*

I. (£10 10s.).—Mrs. SOFER WHITBURN, Amport St. Marys, Andover, Hants, whole, **Graceful** (3368).

R.—Capt. F. B. IMBERT TERRY, M.C., Blue Hayes, Broadclyst, Devon, whole, **Blue Hayes Kiltie** (Vol. 31, Page 234).

OFFERED BY THE SOUTH DEVON HERD BOOK SOCIETY.

*For the South Devon Cow awarded the greatest number of points in Class 120—£4 4s.*

[NOT AWARDED.]

OFFERED BY THE BRITISH FRIESIAN CATTLE SOCIETY.

*To the owner of the Cow awarded the greatest number of points in Class 120, provided that such Cow was a British Friesian—£25.*

[NOT AWARDED.]



## BUTTER TEST.

CLASS 121.—*Cow, of any breed or cross, obtaining the greatest number of points by the practical test of the separator and churn. [23 entries.]*

**I. (£10).**—**CLEMENT E. TORY**, Higher Burton House, Dorchester, white and brown Ayrshire, **Eglinton Juno** (95438), born 30th October, 1923, bred by Earl of Eglinton and Winton, Tonbridge, Kent; s Eglinton Mains Snow King (19734), d Eglinton Mains Midsummer (80963), s d Howie's Hot Stuff (17895).

**II. (£5) and Gold Medal\***—**Mrs. SOFER WHITBURN**, Amport St. Marys, Andover, Hants, whole Jersey, **Graceful** (3368), born 27th November, 1922; s Palm (14074), d Gentile 8th (Vol. 29, Page 259), s d Merry Boy (11430).

**III. (£2).**—**NORMAN D. MILLER**, Buckyette, Totnes, Devon, Dairy South Devon, **Buckyette Heather** (A.L. 6858), bred by Wm. Staddon, Newton Abbot.

**R.**—The Right Hon. **THE VISCOUNT FOLKESTONE**, Longford Estate Office, Alderbury, Salisbury, Red Poll, **Longford Bloom**, born 23rd January, 1924; s Sudbourne Choice Goods, d Dallinghoo Blossom 3rd, s d Gressenhall Taurus.

**Certificate of Merit.**—**Capt. F. B. IMBERT TERRY, M.C.**, Blue Hayes, Broad Clyst, Devon, whole Jersey, **Blue Hayes Kiltie** (Vol. 31, Page 234), born 25th January, 1919; s Hotspur (12657), d Blue Hayes Scottie (Vol. 26, Page 239), s d Simpkins Chief (10446).—Ditto, ditto, whole Jersey, **Blue Hayes Bannock** (1520), born 19th August, 1922; s Pro Bacchus (13085), d Blue Hayes Baff (Vol. 32, Page 75), s d Hotspur (12657).—Ditto, ditto, whole Jersey, **Blue Hayes White Label** (5998), born 23rd January, 1925; s Hunstrete Tuneful Lad (14322), d Blue Hayes Whisky (Vol. 33, Page 75), s d Pro Bacchus (13085).—**Sir HAROLD MACKINTOSH**, Conyngham Hall, Knaresborough, whole Jersey, **Bradley's Oxford Lillian 3rd**, born 17th December, 1926, bred by Duke of Somerset; s Roundway Boaz, d Bradley's Oxford Lillian 2nd, s d Dandy.

GIVEN BY THE ENGLISH GUERNSEY CATTLE SOCIETY.

*For the Guernsey Cow obtaining the best results.*

**I. (£5).**—**Mrs. YORKE**, Peter's Farm, Sandy Lane, near Chippenham, Wiltshire, fawn and white, **Vern Maggie** (24768), born 24th September, 1925, bred by J. Nicolle, Baissieres Place, St. Andrews, Guernsey; s Sequels Attorney (4561 P.S.), d Maggie 8th of Blaye Farm (P.S. 237070), s d Pearls Star (P.S. 259).

**R.**—**WILLIAM THOMAS SOBEY**, Penwartha, Perranporth, Cornwall, fawn and white, **Prudence of Perranzabuloe** (22547), born 31st May, 1925, bred by Mrs. Vosper, Mount, Perranporth, Cornwall; s Mithian Governor (5100), d Bosisto Minette (16183), s d Lands End Prince (3742).

\* Given by the English Jersey Cattle Society for the Jersey Cow obtaining the best results and not less than 42 points.

(Certificates of Merit were also awarded to Jersey Cows, 4 years old and under obtaining 30 points, and Cows over 4 years old obtaining 35 points. In the event of Cows obtaining the same number of points, the Prize was awarded to the Cow that had been the longest time in milk).

## **SHEEP.**

### **DEVON LONGWOOLLED.**

**CLASS 122.**—*Devon Longwoolled Shearling Ram.* [9 entries.]

**I. (£10.)**—FREDERICK WHITE, Torweston, Williton, Somerset.

**II. (£5.)**—FREDERICK WHITE.

**III. (£2.)**—J. H. TRICK, Fordton Barton, Crediton, Devon.

**R.**—FREDERICK WHITE.

**CLASS 123.**—*Pair of Devon Longwoolled Ram Lambs, dropped in  
1930.* [3 entries.]

**I. (£10.)**—FREDERICK WHITE, Torweston, Williton, Somerset.

**II. (£5.)**—FREDERICK WHITE.

**III. (£2.)**—THOMAS JOHN PEARCEY, Peadhill, Tiverton, Devon.

**CLASS 124.**—*Pen of 3 Devon Longwoolled Shearling Ewes.* [4 entries.]

**I. (£10.)**—FREDERICK WHITE, Torweston, Williton, Somerset.

**II. (£5.)**—FREDERICK WHITE.

**III. (£2.)**—W. HANCOCK, New Barn, Chulmleigh.

**R.**—THOMAS JOHN PEARCEY, Peadhill, Tiverton, Devon.

**CLASS 125.**—*Pen of 3 Devon Longwoolled Ewe Lambs, dropped in  
1930.* [3 entries.]

**I. (£10.)**—FREDERICK WHITE, Torweston, Williton, Somerset.

**II. (£5.)**—FREDERICK WHITE.

**III. (£2.)**—THOMAS JOHN PEARCEY, Peadhill, Tiverton, Devon.

### **SOUTH DEVON.**

(Classes 126 to 128. Cancelled owing to insufficiency of entries).

### **DEVON CLOSE WOOL.**

(£10 towards the Prizes in these Classes were given by the Devon Close Wool Sheep Society).

**CLASS 129.**—*Devon Close Wool Shearling Ram.* [4 entries.]

**I. (£10.)**—H. R. LERWILL, Maddox Down, East Down, Barnstaple.

**II. (£5.)**—A. PARKHOUSE & SONS, Holwell, Eastdowne, Barnstaple.

**III. (£2.)**—DANIEL NICHOLAS PURCHASE, C.C., Great Hele, Barton, South Molton, Devon.

**1**                    *Prizes awarded to Devon Close Wool and  
Hampshire Down Sheep.*

**CLASS 130.**—*Pair of Devon Close Wool Ram Lambs, dropped in  
1930. [2 entries.]*

**I. (£10.)**—A. R. LERWILL, Maddox Down, East Down, Barnstaple.

**II. (£5.)**—A. PARKHOUSE & SONS, Holwell, Eastdowne, Barnstaple.

**CLASS 131.**—*Pen of 3 Devon Close Wool Shearling Ewes. [1 entry.]*

**I. (£10.)**—A. PARKHOUSE & SONS, Holwell, Eastdowne, Barnstaple.

**CLASS 132.**—*Pen of 3 Devon Close Wool Ewe Lambs, dropped in  
1930. [2 entries.]*

**I. (£10.)**—A. PARKHOUSE & SONS, Holwell, Eastdowne, Barnstaple.

**II. (£5.)**—A. R. LERWILL, Maddox Down, East Down, Barnstaple.

## **SOUTHDOWN.**

(Classes 133 and 134. Cancelled owing to insufficiency of entries).

## **HAMPSHIRE DOWN.**

(£25 towards the Prizes in these Classes and the Champion Prize were given by the  
Hampshire Down Sheep Breeders' Association).

**CLASS 135.**—*Hampshire Down Shearling Ram. [13 entries.]*

**I. (£10.)**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts,  
bred by Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring, Herts.

**II. (£5.)**—Col. C. W. SOFER WHITBURN, Ampport St. Marys, Andover, Hants.

**III. (£2.)**—Major and Mrs. JERVOISE, Herriard Park, Basingstoke.

**R.**—Sir GOMER BERRY, Bart.

**V.H.C.**—Major VALENTINE S. BLAND, The Warren, Aldbourne, Wilts.

**H.C.**—Major and Mrs. JERVOISE.

**C.**—PERCY C. TORY, Shapwick, Blandford.

**CLASS 136.**—*Hampshire Down Ram Lamb, dropped in 1930.  
[11 entries.]*

**I. (£10.)**—Col. C. W. SOFER WHITBURN, Ampport St. Marys, Andover, Hants.

**II. (£5.)**—EDWARD CLIFTON-BROWN, Burnham Grove, Burnham, Bucks.

**III. (£2.)**—Major V. S. BLAND, The Warren, Aldbourne, Wilts.

**R.**—Major and Mrs. JERVOISE, Herriard Park, Basingstoke.

**V.H.C.**—PERCY C. TORY, Shapwick, Blandford.

**H.C.**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, bred by Major A. Morrison, D.S.O., Pendley Stock Farms, Tring, Herts.

**C.**—Sir GOMER BERRY, Bart.

CLASS 137.—*Pen of 3 Hampshire Down Ram Lambs, dropped in 1930.* [6 entries.]

**I. (£10)** and **Champion (£5)\***—Major V. S. BLAND, The Warren, Aldbourne, Wilts.

**II. (£5.)**—Major and Mrs. JERVOISE, Herriard Park, Basingstoke.

**III. (£2.)**—Col. C. W. SOFER WHITBURN, Ampport St. Marys, Andover, Hants.

**R.**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, bred by Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring, Herts.

**V.H.C.**—CLEMENT FORD, Branscombe, Devon.

CLASS 138.—*Pen of 3 Hampshire Down Shearling Ewes.* [4 entries.]

**I. (£10.)**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, bred by Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring, Herts.

**II. (£5.)**—W. MELVILLE WILLS, Estate Office, Bracken Hill, Leigh Woods, near Bristol, bred by J. Goldsmith, Horndean, Cosham, Hants.

**R.**—EDWARD CLIFTON-BROWN, Burnham Grove, Burnham, Bucks.

**V.H.C.**—Sir GOMER BERRY, Bart.

CLASS 139.—*Pen of 3 Hampshire Down Ewe Lambs, dropped in 1930.* [8 entries.]

**I. (£10)** and **R. for Champion\***—Col. C. W. SOFER WHITBURN, Ampport St. Marys, Andover, Hants.

**II. (£5.)**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, bred by Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring, Herts.

**III. (£2.)**—Major V. S. BLAND, The Warren, Aldbourne, Wilts.

**R.**—PERCY C. TORY, Shapwick, Blandford.

**V.H.C.**—EDWARD CLIFTON-BROWN, Burnham Grove, Burnham, Bucks.

**H.C.**—Major and Mrs. JERVOISE, Herriard Park, Basingstoke.

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\* Champion Prize for the Best Ram, Ram Lamb or Pen in the Hampshire Down Classes.

iii *Prizes awarded to Oxford Down and Dorset Horn Sheep.*

**OXFORD DOWN.**

CLASS 140. *Oxford Down Shearling Ram.* [3 entries.]

I. (£10.)—HUGH WILLIAM STILGOE, The Grounds, Adderbury, near Banbury, Oxon.

II. (£5.)—HUGH WILLIAM STILGOE

III. (£2.)—HUGH WILLIAM STILGOE.

CLASS 141.—*Pen of 3 Oxford Down Ram Lambs, dropped in 1930.*  
[4 entries.]

I. (£10.) WILLIAM F G WATTS, Elsfield, Oxford.

II. (£5.) HUGH WILLIAM STILGOE, The Grounds, Adderbury, near Banbury,

III. (£2.)—Major R. F. FULLER, Great Chalfield, Melksham.

R.—THOMAS RICH & SON, Aldsworth, Cheltenham, Glos.

CLASS 142.—*Pen of 3 Oxford Down Shearling Ewes.* [1 entry.]

I. (£10.)—HUGH WILLIAM STILGOE, The Grounds, Adderbury, near Banbury, Oxon

(£10 towards the Prizes in Class 143 were given by the Oxford Down Sheep Breeders' Association)

CLASS 143. *Pen of 3 Oxford Down Ewe Lambs, dropped in 1930.*  
[4 entries.]

I. (£10.)—WILLIAM F G WATTS, Elsfield, Oxford.

II. (£5.)—Major R. F. FULLER, Great Chalfield, Melksham.

III. (£2.)—THOMAS RICH & SON, Aldsworth, Cheltenham, Glos.

R.—HUGH WILLIAM STILGOE, The Grounds, Adderbury, near Banbury, Oxon.

**DORSET HORN.**

(£18 towards the Prizes in these Classes were given by the Dorset Horn Sheep Breeders' Association)

CLASS 144.—*Dorset Horn Shearling Ram.* [2 entries.]

I. (£10.)—W. RUPERT TORY, Clenstone Manor, Blandford, Dorset.

II. (£5.)—H. W. W. HOSKYNs, North Perrott Manor, Crewkerne.

CLASS 145.—*Pair of Dorset Horn Ram Lambs, dropped after November 1, 1929.* [3 entries.]

I. (£10.)—W. RUPERT TORY, Clenstone Manor, Blandford.

II. (£5.)—WILLIAM RALPH ELWORTHY, Southmead, Monkton, Dorchester.

III. (£2.)—H. W. W. HOSKYNs, North Perrott Manor, Crewkerne.

CLASS 146.—*Pen of 3 Dorset Horn Shearling Ewes.* [4 entries.]

I. (£10.)—W. RUPERT TORY, Clenstone Manor, Blandford.

II. (£5.)—WILLIAM RALPH ELWORTHY, Southmead, Monkton, Dorchester.

III. (£2.)—W. RUPERT TORY.

R.—H. W. W. HOSKYNs, North Perrott Manor, Crewkerne.

CLASS 147.—*Pen of 3 Dorset Horn Ewe Lambs, dropped after November 1, 1929.* [4 entries.]

I. (£10.)—W. RUPERT TORY, Clenstone Manor, Blandford, Dorset.

II. (£5.)—W. RUPERT TORY.

III. (£2.)—WILLIAM RALPH ELWORTHY, Southmead, Monkton, Dorchester.

R.—H. W. W. HOSKYNs, North Perrott Manor, Crewkerne.

## **DORSET DOWN.**

(£15 towards the Prizes in these Classes were given by the Dorset Down Sheep Breeders' Association).

CLASS 148.—*Dorset Down Shearling Ram.* [4 entries].

I. (£10).—P. & C. SEWARD, Weston, Petersfield, Hants.

II. (£5).—MRS. LIONEL DE ROTHSCHILD, Exbury, Southampton.

III. (£2).—MESSRS. DEBENHAM & TORY, Anderson, Blandford.

R.—P. & C. SEWARD.

CLASS 149.—*Pen of 3 Dorset Down Ram Lambs, dropped in 1930.*  
[4 entries].

I. (£10).—P. & C. SEWARD, Weston, Petersfield, Hants.

II. (£5).—MRS. LIONEL DE ROTHSCHILD, Exbury, Southampton.

III. (£2).—MESSRS. DEBENHAM & TORY, Anderson, Blandford, Dorset.

R.—Major GEORGE FREDERICK DAVIES, M.P., Leigh House, Chard.

CLASS 150.—*Pen of 3 Dorset Down Shearling Ewes.* [3 entries.]

I. (£10).—MRS. LIONEL DE ROTHSCHILD, Exbury, Southampton.

II. (£5).—MESSRS. DEBENHAM & TORY, Anderson, Blandford, Dorset.

III. (£2).—Major GEORGE FREDERICK DAVIES, M.P., Leigh House, Chard.

## **EXMOOR HORN.**

(£17 towards the Prizes in these Classes were given by the Exmoor Horn Sheep Breeders' Society).

CLASS 151.—*Exmoor Horn Shearling Ram.* [5 entries.]

I. (£10).—DANIEL NICHOLAS PURCHASE, C.C., Great Hele Barton, South Molton, N. Devon.

II. (£5).—FRED BEADLE, Stowey Farm, Timberscombe, Taunton.

III. (£2).—DANIEL NICHOLAS PURCHASE, C.C.

R.—HENRY EDWARD BOWDEN GUNDRY, Melplash Court, Dorset.

CLASS 152.—*Pen of 3 Exmoor Horn Ram Lambs, dropped in 1930.*  
[1 entry.]

I. (£10).—DANIEL NICHOLAS PURCHASE, Great Hele Barton, South Molton, N. Devon,

CLASS 153.—*Pen of 3 Exmoor Horn Shearling Ewes.* [3 entries.]

I. (£10).—FRED BEADLE, Stowey Farm, Timberscombe, Taunton.

II. (£5).—DANIEL NICHOLAS PURCHASE, C.C., Great Hele Barton, South Molton, N. Devon.

III. (£2).—HENRY EDWARD BOWDEN GUNDRY, Melplash Court, Dorset.

CLASS 154.—*Pen of 3 Exmoor Horn Ewe Lambs, dropped in 1930.*  
[2 entries.]

I. (£10).—FRED BEADLE, Stowey Farm, Timberscombe, Taunton.

II. (£5).—DANIEL NICHOLAS PURCHASE, C.C., Great Hele Barton, South Molton, N. Devon.

**SUFFOLK.**

(£10 towards the Prizes in these Classes were given by the Suffolk Sheep Society)

**CLASS 155.**—*Suffolk Shearling Ram.* [5 entries.]

**I. (£10.)**—HOLLESLEY BAY LABOUR COLONY, Hollesley, Suffolk.

**II. (£5.)**—R. H. FOA, Holywell Park, Wrotham, Kent, **Holywell Banker,**

**III. (£2.)**—HOLLESLEY BAY LABOUR COLONY.

**R.**—A. PRESTON JONES, Mickleover House, Derby.

**CLASS 156.**—*Pen of 3 Suffolk Ram Lambs, dropped in 1930.* [4 entries.]

**I. (£10.)**—HOLLESLEY BAY LABOUR COLONY, Hollesley, Suffolk.

**II. (£5.)**—R. H. FOA, Holywell Park, Wrotham, Kent.

**R.**—A. PRESTON JONES, Mickleover House, Derby.

**CLASS 157.**—*Pen of 3 Suffolk Shearling Ewes.* [4 entries.]

**I. (£10.)**—HOLLESLEY BAY LABOUR COLONY, Hollesley, Suffolk.

**II. (£5.)**—R. H. FOA, Holywell Park, Wrotham, Kent.

**III. (£2.)**—A. PRESTON JONES, Mickleover House, Derby.

**R.**—HOLLESLEY BAY LABOUR COLONY.

**RYELAND.**

(£15 of the Prizes in these Classes and the Champion Prize were given by the Ryeland Flock Book Society).

**CLASS 158.**—*Ryeland Shearling Ram.* [6 entries.]

**I. (£10) and Silver Medal\***—WALTER WOOLLAND, Baydon Manor, Ramsbury, Marlborough, Wilts.

**II. (£5.)**—WALTER WOOLLAND.

**III. (£2.)**—W. L. HORBURY, Ettington Park, Stratford-on-Avon.

**R.**—E. W. LANGFORD (LD.), Wye Bridge, Hereford.

**H.C.**—W. L. HORBURY.

**CLASS 159.**—*Pen of 3 Ryeland Ram Lambs, dropped in 1930.* [2 entries.]

**I. (£10.)**—WALTER WOOLLAND, Baydon Manor, Ramsbury, Marlborough, Wilts.

**II. (£5.)**—Captain D. M. WILLS, Barley Wood, Wrington, Som.

**CLASS 160.**—*Pen of 3 Ryeland Shearling Ewes.* [3 entries.]

**I. (£10) and R. for Silver Medal\***—E. W. LANGFORD (LD.), Wyebridge, Hereford.

**II. (£5.)**—WALTER WOOLLAND, Baydon Manor, Ramsbury, Marlborough, Wilts.

**III. (£2.)**—W. L. HORBURY, Ettington Park, Stratford-on-Avon.

\* A Silver Medal for the Best Ram or Pen in the Ryeland Classes.

## DARTMOOR.

(£10 towards the Prizes in Class 162 were given by the Dartmoor Sheep Breeders' and Flock Book Association).

CLASS 161.—*Dartmoor Shearling Ram.* [5 entries.]

- I. (£10).—RICHARD PALMER LUCE, Lower Chaddlehanger, Tavistock.
- II. (£5).—GOVERNOR, H.M. PRISON, Princetown, S. Devon.
- III. (£2).—JOSEPH BALL, Crease, Tavistock, Devon, **Crease No. 35** (4413).
- C.—RICHARD PALMER LUCE.

CLASS 162.—*Pair of Dartmoor Ram Lambs, dropped in 1930.*  
[5 entries.]

- I. (£10).—RICHARD PALMER LUCE, Lower Chaddlehanger, Tavistock.
- II. (£5).—RICHARD PALMER LUCE.
- III. (£2).—J. W. SYMONS, E. Sherford, Brixton, Plymouth.
- C.—JOHN E. DAWE & SONS, Burns Hall, Lewdown, Devon.

CLASS 163.—*Pen of 3 Dartmoor Shearling Ewes.* [2 entries.]

- I. (£10).—GOVERNOR, H.M. PRISON, Princetown, S. Devon.
- II. (£5).—J. W. SYMONS, E. Sherford, Brixton, Plymouth.

CLASS 164.—*Pen of 3 Dartmoor Ewe Lambs, dropped in 1930.*  
[5 entries.]

- I. (£10).—J. W. SYMONS, E. Sherford, Brixton, Plymouth.
- II. (£5).—JOHN E. DAWE & SONS, Burns Hall, Lewdown, Devon.
- III. (£2).—RICHARD PALMER LUCE, Lower Chaddlehanger, Tavistock.
- C.—JOHN E. DAWE & SONS.

## KERRY HILL.

(£12 towards the Prizes in these Classes were given by the Kerry Hill (Wales) Flock Book Society).

CLASS 165.—*Kerry Hill Ram, 2 Shear and upwards.* [3 entries.]

- I. (£10).—Sir DAVID R. LLEWELLYN, Bart., The Court, St. Fagans, **St. Fagans Don Juan** (14573).
- II. (£5).—Miss R. B. BABCOCK, Shawlands, Lingfield, Surrey, **Welshpool Daimler** (14738), bred by Cyril Alderson, Leighton, Welshpool.
- III. (£2).—C. B. H. PHIPPS, Chalcot, Westbury, Wilts, **Pentrenant Writer**.

CLASS 166.—*Kerry Hill Shearling Ram.* [4 entries.]

- I. (£10).—Hon. Mrs. ESME SMYTH, Ashton Court, near Bristol, **Ashton Gallant**.
- II. (£5).—Sir DAVID R. LLEWELLYN, Bart., The Court, St. Fagans, **St. Fagans Elector**.
- III. (£2).—Sir DAVID R. LLEWELLYN, Bart., **St. Fagans Elton**.

CLASS 167.—*Pen of 3 Kerry Hill Shearling Ewes.* [2 entries.]

- I. (£10).—Hon. Mrs. ESME SMYTH, Ashton Court, near Bristol.
- II. (£5).—Sir DAVID R. LLEWELLYN, Bart., The Court, St. Fagans.



## GOATS.

(£10 towards the Prizes in these Classes were given through the British Goat Society)

CLASS 168.—*Female Goat, in-Milk, any age, British Alpine, Toggenburg, British Toggenburg, Saanen or British Saanen.* [7 entries.]

I. (£2 10s.) and Challenge Certificates(*ab*) and Bronze Medal(*c*).—Miss C. CHAMBERLAIN, Westons, Lyndhurst, Hants, white British Saanen, Q\*Q\*Q\* **Worthy of Westons** (H.B. 7969), born 21st February, 1927; s Poet of Bashley (H.B. 7457), d Welfare Q\*Q\* of Westons (H.B. 4640), s d Ch. \*Proud (2853). (Last kid 21st June, 1929).

II. (£1 10s.).—Mrs. MORCOM, The Clock House, Bromsgrove, chocolate hornless British Toggenburg, **Cornish Catch\***, born 13th June, 1927; s Raydon Benedict, d Cornish Ode, s d †Fryston Straitlace. (Last kid 19th February, 1930).

III. (15s.).—Miss EMILY SKIDMORE, Ashley Leigh, Box, Wilts, white British Saanen, §Heddon Sophia \*Q\*\* (H.B. 7231), born 4th March, 1925; s §Peter of Bashley (4207), d Heddon Spring (5263). s d §Peter of Bashley (4207). (Last kid 8th April, 1930).

R.—Mrs. MORCOM, chocolate hornless British Toggenburg, **Cornish Jujube**, born 7th March, 1928; s †Cornish Quirk, d Cornish Delight Q\*Q\*, s d §Nougat Q\*. (Last kid 2nd February, 1930).

H.C.—Miss EMILY SKIDMORE, white British Saanen, **Heddon Spark** (8520), born 15th February, 1928; s Springfield Vitality (S. 89), d Heddon §Spring \*Q\*\*, s d †Peter of Bashley (4207). (Last kid 24th March, 1930).

C.—Mrs. MORCOM, white hornless British Saanen, **Saanie**; s Cornish Brigadier. (Last kid 6th March, 1930).

CLASS 169.—*Female Goat, in-Milk, any age, any other variety.* [7 entries.]

I. (£2 10s.) and R. for Challenge Certificate(*a*).—Miss POPE, Bashley Lodge, New Milton, black and white, **Pleaser of Bashley** (Q\*Q\*Q\*Q\*Q\* H.B. 7590), born 28th March, 1926; s †Prefect of Bashley, d Playfellow of Bashley (Q\*Q\*Q\*Q\*Q\*). (Last kid 18th February, 1930).

II. (£1 10s.) and R. for Challenge Certificate(*b*).—Miss POPE, grey, **Proof of Bashley** (H.B. 8487), born 31st January, 1928; s †Feltham Asterus, d Ch. Problem of Bashley. (Last kid 22nd February, 1930).

(a) Given by the British Goat Society, a Challenge Certificate for the Best Female Goat over two years that has borne a kid

(b) A Challenge Certificate for the Best Dual Purpose Goat over two years that has borne a kid.

(c) A Bronze Medal for the Best Female Exhibit.

**III. (15s.)**—Miss EMILY SKIDMORE, Ashley Leigh, Box, Wilts, black and white roan, **Heddon Saltcellar** (7446), born 5th March, 1925; s †Peter of Bashley (4207), d Heddon Amie\* (4409), s d Tremanton of Trenance (3286).

**R.**—Miss D. FULLERTON, The Cottage, Hamble, Southampton, black and white, **Hamble Dusk** (H.B. 8941), born 8th May, 1928; s †Didgemere Doctor (H.B. 8436), d Didgemere Day (H.B. 7172). (Last kid 11th March, 1930).

**H.C.**—Miss BARNABY, Abbeymead, Hamble, Hants, fawn British, **Feltham Fame** (H.B. 9043), born 19th February, 1929, bred by Mrs. Browell, Feltham Vicarage, Feltham; s Playwright of Bashley, d Play of Bashley (Q\*Q\*Q\*Q\*), s d Herne Bay Thark. (Last kid 15th February, 1930).

**C.**—Mrs. MORCOM, The Clock House, Bromsgrove, roan horned Anglo-Nubian-Swiss, **Cornish Priscilla**, born 27th April, 1928; s †Priest of Bashley, d Didgemere Dimple (\*Q\*Q\*Q\*\*), s d Ch. †Prophet of Bashley. (Last kid 11th March, 1930).

CLASS 170.—*Goatling, any variety, over one but not exceeding two years.* [3 entries.]

**I. (£2 10s.)** and **R.** for Bronze Medal(c)—Miss POPE, Bashley Lodge, New Milton, white, **Mostyn Mandoline** (9040), born 15th January, 1929, bred by Miss Mostyn Owen, Harrogate; s †Didgemere Aristocrat, d Mostyn Music Q\*.

**II. (£1 10s.)**—Miss E. SKIDMORE, Ashley Leigh, Box, Wilts, white British Saanen, **Heddon Sugar** (9017), born 8th March, 1929; s Heddon Solan (H.B. 8322), d Heddon Sprig (7453), s d Ch. Schnapps (S. 34).

**R.**—Ditto, ditto, white British Saanen, **Heddon Chace**, born 28th February, 1929; s Heddon Solan, (8327), d Heddon Silvo (7452), s d Ch. Schnapps (S. 34).

CLASS 171.—*Female Kid, any variety, not exceeding one year.* [7 entries.]

**I. (£2 10s.)**—Miss EMILY SKIDMORE, Ashley Leigh, Box, Wilts, white British Saanen, **Heddon Song**, born 6th February, 1930; s Heddon Solan (8322), d Heddon Saffron\* (5258), s d Peter of Bashley (4207).

**II. (£1 10s.)**—Miss C. CHAMBERLAIN, Westons, Lyndhurst, Hants, brown and white British Toggenburg, **Wakeful of Westons**, born 8th March, 1930; s †Raydon Pickle (H.B. 9232), d Ch. Wistful Q\* of Westons (H.B. 4641), s d †Edenstead Pluck (H.B. 3007).

**III. (15s.)**—Miss POPE, Bashley Lodge, New Milton, brown and white, **Proffer of Bashley** (9532), born 22nd February, 1930; s †Raydon Pickle, d Proof of Bashley.

**R.**—Miss C. CHAMBERLAIN, brown and white British Toggenburg, **Wary of Westons**, born 8th March, 1930; s †Raydon Pickle (H.B. 9232), d Ch. Wistful Q\* of Westons (H.B. 4641), s d †Edenstead Pluck (3007).

**H.C.**—Miss BARNABY, Abbeymead, Hamble, black British Alpine, **Bitterne Polly Flinders** (9517), born 18th February, 1930; s †Hamble Pongo, d Tarbert Miss Muffit\*, s d Druid.

C.—Miss D. FULLERTON, The Cottage, Hamble, Southampton, black and white, **Hamble Dawn**, born 11th March, 1930; s †Hamble Pongo (H.B. 9365), d Hamble Dusk (H.B. 8941).

CLASS 172.—*Milking Competition for Quality (Butter Fat only), quantity and time (two milkings).* [22 entries.]

I. (£2 10s.)—Miss C. CHAMBERLAIN, Westons, Lyndhurst, Hants, black and white British Alpine, **Ch. Whimsical of Westons Q\*Q\*** (H.B. 7051), born 26th March, 1925; s †Didgemere Dictator (H.B. 6816), d Ch. Wistful of Westons Q\* (H.B. 4641), s d †Edenstead Pluck (H.B. 3007).

II. (£1 10s.) Mrs. MORCOM, The Clock House, Bromsgrove, chocolate hornless British Toggenburg, **Cornish Jujube**, born 7th March, 1928; s †Cornish Quirk, d Cornish Delight Q\*Q\*, s d §Nougat Q\*. (Last kid 2nd February, 1930).

III. (15s.)—Miss POPE, Bashley Lodge, New Milton, grey, **Proof of Bashley** (H.B. 8487), born 31st January, 1928; s †Feltham Asterus, d Ch. Problem of Bashley. (Last kid 22nd February, 1930).

R.—Miss C. CHAMBERLAIN, Westons, Lyndhurst, Hants, white British Saanen, **Q\*Q\*Q\* Worthy of Westons** (H.B. 7969), born 21st February, 1927; s Poet of Bashley (H.B. 7457), d Welfare Q\*Q\* of Westons (H.B. 4640), s d Ch. \*Proud (2853). (Last kid 21st June, 1929).

CLASS 173.—*Milking Competition for Quantity and Time only (three milkings).* [19 entries.]

I. (£2 10s.)—Miss C. CHAMBERLAIN, Westons, Lyndhurst, Hants, black and white British Alpine, **Ch. Whimsical of Westons Q\*Q\*** (H.B. 7051), born 26th March, 1925; s †Didgemere Dictator (H.B. 6816), d Ch. Wistful of Westons Q\* (H.B. 4641), s d †Edenstead Pluck (H.B. 3007).

II. (£1 10s.) Miss POPE, Bashley Lodge, New Milton, black and white, **Pleader of Bashley (Q\*Q\*Q\*Q\*Q\* H.B. 7590)**, born 28th March, 1926; s †Prefect of Bashley, d Playfellow of Bashley (Q\*Q\*Q\*Q\*). (Last kid 18th February, 1930).

III. (15s.)—Ditto, ditto, grey, **Proof of Bashley** (H.B. 8487), born 31st January, 1928; s †Feltham Asterus, d Ch. Problem of Bashley. (Last kid 22nd February, 1930).

R.—Miss C. CHAMBERLAIN, white British Saanen, **Q\*Q\*Q\* Worthy of Westons** (H.B. 7969), born 21st February, 1927; s Poet of Bashley (H.B. 7457), d Welfare Q\*Q\* of Westons (H.B. 4640), s d Ch. \*Proud (2853). (Last kid 21st June, 1929).

The Prizes awarded at this Show were also included in the awards for the British Goat Society's "Breeder's" Perpetual Challenge Cup and "Stud Goat" Challenge Cup.

## PIGS.

### BERKSHIRE.

(£5 towards the Prizes in these Classes and the Two Silver Cups were given by the National Pig Breeders' Association, and ages were calculated to May 28, 1930).

CLASS 174.—*Berkshire Boar, exceeding 18 months old.* [6 entries.]

**I. (£8) and Silver Cup\***—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, **Highfield Royal President 19th** (1914), born 1st September, 1926, bred by F. Townend, Highfield, Moor Allerton, Leeds; s Highfield Royal President 2nd (B. 339), d Highfield Princess Royal 5th (S. 1406), s d Pamber President (22702).

**II. (£5.)**—HARRY C. INWOOD, Ridgemoor, Burghclere, **Highfield Royal Pygmalion 13th** (2077), born 16th June, 1927, bred by F. Townend, Highfield, Moor Allerton, Leeds; s Highfield Royal Pygmalion 3rd (852), d Highfield Princess Royal 5th (1406), s d Pamber President (22702).

**III. (£2.)**—S. CECIL ARMITAGE, Lenton Fields, Nottingham, **Richings Beau Royal**, born 10th August, 1928, bred by Eric Sykes, Richings Park, Colnbrook, Bucks; s Highfield Royal Pygmalion 3rd, d Richings Orange Girl 3rd, s d Richings Royalist 2nd.

**R.**—W. A. BINDLEY, Woodbourne, Augustus Road, Edgbaston, **Highfield Royal Pygmalion 11th** (2073), born 9th February, 1927, bred by F. Townend, Highfield, Moor Allerton, Leeds; s Highfield Royal Pygmalion 3rd (852), d Highfield Marina British Queen (4898), s d Highfield Royal President 2nd (339).

CLASS 175.—*Berkshire Boar, not exceeding 18 months old.* [5 entries.]

**I. (£7.) and R. for Silver Cup\***—HILLSBOROUGH FRUIT FARM, Hillsborough, Canford, Wimborne, **Chappel President**, born 5th January, 1929, bred by T. E. Prest, Swinton, Yorks; s Highfield Royal President 6th, d Swinton Careful Margery, s d Hammond Carrier.

**II. (£4.)**—EDWARD CLIFTON-BROWN, Burnham Grove, Burnham, Bucks, **Burnham Clarence** (2779), born 29th March, 1929; s Burnham Claudius (1971), d Burnham Orange Maruja 2nd (7484), s d Forest Sunstar (1138).

**III. (£2.)**—HENRY WILLIAM DUFOSEE, Stalbridge Park, Dorset, **Stalbridge Roe Buck**, born 14th July, 1929; s Manor Umpire (B. 1660), d Motcombe Happy Girl 15th (S. 5896), s d Manor Pygmalion (B. 1283).

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\* For Best Boar in the Berkshire Classes and a Silver Medal to the Breeder.

**R.**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, **Hillsborough Mr. Prim 3rd**, born 25th April, 1929, bred by Canford Schools, Canford, Wimborne; s Ashe Markman (1893), d Woodhouse Miss Prim 4th, s d Stonehenge Druid (1560).

CLASS 176.—*Berkshire Breeding Sow, exceeding 18 months old.*  
[8 entries.]

**I. (£8)** and Silver Cup†—CANFORD SCHOOL, Canford, Wimborne, **Southworth Lunn 12th**, born 14th July, 1927, bred by J. Ball, Warrington; s Heale Nutmeg 2nd, d Southworth Lunn 5th, s d Swinton Printer.

**II. (£5.)** Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, **Basildon Princess Royal**, born 5th January, 1928, bred by Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring; s Highfield Royal Pygmalion 8th (B. 2067), d Highfield Princess Royal 41st (S. 7184), s d Highfield Royal President 2nd (B. 339).

**III. (£2.)**—HARRY C. INWOOD, Ridgemoor, Burghclere, **Ridgemoor Empress**, born 20th May, 1928; s Monarch (1730), d Dunman of Columbia 7th (7712), s d Basildon Bombardier (1166).

CLASS 177. *Berkshire Breeding Sow, not exceeding 18 months old.*  
[6 entries.]

**I. (£7)** and R. for Silver Cup†—HARRY C. INWOOD, Ridgemoor, Burghclere, **Ridgemoor Princess 2nd**, born 2nd February, 1929; s Highfield Royal Pygmalion 13th (2077), d Hillfort Princess 3rd (7960), s d Pamber Ace of Spades.

**II. (£4.)**—S. CECIL ARMITAGE, Lenton Fields, Nottingham, **Basildon Princess Royal 10th**, born 12th January, 1929, bred by Major Morrison, Basildon Park, near Reading; s Heale Nutmeg 2nd, d Highfield Princess Royal 41st, s d Highfield Royal President 2nd.

**III. (£2.)**—HILLSBOROUGH FRUIT FARM, Canford, Wimborne, **Hillsborough Miss Prim**; s Ashe Markmen, d Woodhouse Miss Prim, 4th, s d Stonehenge Druid.

**R.**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, Herts, **Basildon Princess Royal 8th**, born 12th January, 1929, bred by Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring; s Heale Nutmeg 2nd (26448), d Highfield Princess Royal 41st (S. 7184), s d Highfield Royal President 2nd (B. 339).

† For Best Sow in the Berkshire Classes and a Silver Medal to the Breeder.

## **LARGE BLACK.**

(£15 towards the Prizes in these Classes and the Silver Medals were given by the Large Black Pig Society).

**CLASS 178.**—*Large Black Boar, farrowed before May 1, 1929.*  
[3 entries.]

**I. (£8)** and Silver Medal\*—**WALTER J. WARREN**, Deacons Farm, Staple-grove, Taunton, **Kibbear Royal Henry 1st** (D. 679), born 27th August, 1927; s Tinten Doleful Dick, d Kibbear Royal Lady 12th, s d Kibbear Royal Willie.

**II. (£5.)**—**T. F. JAMES**, Chantershier Farm, Norwood Hill, Horley, **Valley Cheerio** (E. 511), born 24th January, 1928, bred by J. C. Olver, Woodland Valley, Ladock, Cornwall; s Treluckey Traveller 1st (31685), d Beauty of the Valley 67 (C. 2404), s d Valley Sportsman (23735).

**III. (£2.)**—**JOHN WARNE & SON**, Tregonhayne Manor, Tregoney, Grampound Road, Cornwall, **Trevellos Felix 3rd** (A. 1259), born 2nd June, 1924; s Trevellos Laddie 6th (A. 26339), d Trevisquite Content 25th (38066), s d Restronquet Pioneer (6997).

**CLASS 179.**—*Large Black Boar, not exceeding 12 months old on May 1, 1930.* [4 entries.]

**I. (£7.)**—**T. F. JAMES**, Chantershier Farm, Norwood Hill, Horley, Surrey; **Treluckey Swell 3rd** (F. 273), born 9th July, 1929; s Valley Cheerio (E. 511), d Treluckey Lady 11th (C. 2310), s d Treluckey Pedestrian 1st (B. 183).

**II. (£4.)**—**R. GYNN & SON**, Treslay, Camelford, Cornwall, **Treslay Laddie 5th** (F. 349), born 2nd July, 1929; s Hendra Sunstar (D. 5), d Treslay Sapphire 1st (C. 1866), s d Treslay Blue Blood 1st (B. 477).

**III. (£2.)**—**HARRY E. BASTARD**, Tinten Manor, St. Tudy, Cornwall, **Tinten Whipcord** (F. 397), born 22nd August, 1929; s Fentongollan Result 6th (31229), d Tinten Black Bess 47th (89392), s d Westpetherwin Chief 1st (14483).

**CLASS 180.**—*Large Black Boar, farrowed in 1930.* [4 entries.]

**I. (£7)** and R. for Silver Medal\*—**HARRY E. BASTARD**, Tinten Manor, St. Tudy, Cornwall, **Tinten Warrior 2nd**, born 2nd January; s Fentongollan Result 6th (31229), d Tinten Black Bess 60th (E. 1132), s d Tinten Leader (C. 849).

**II. (£4.)**—**JOHN WARNE & SON**, Tregonhayne Manor, Tregoney, Grampound Road, Cornwall, **Trevellos Felix 4th** (G. 5), born 3rd January; s Trevellos Felix 3rd (A. 1259), d Banns Biddy 2nd (C. 4332), s d Fentongollan Amir 2nd (B. 429).

**III. (£2.)**—**JOHN H. GLOVER**, J.P., Cornwood, S. Devon, **Cornwood Leader** (G. 13), born 12th January; s Tinten Leader (C. 849), d Patshull Susan 4th (D. 594), s d Patshull Prince 1st (B. 405).

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\* For Best Boar in the Large Black Classes.

CLASS 181.—*Large Black Breeding Sow, farrowed before May 1, 1929. [4 entries.]*

I. (£8) and R. for Silver Medal†—JOHN WARNE & SON, Tregongayne Manor, Grampound Road, Cornwall, **Banns Biddy 2nd** (C. 4332), born 28th November, 1926, bred by Mr. Hoskin, Banns, St. Buryan, Penzance; s Fentongollan Amir 2nd (B. 429), d Banns Biddy (B. 1262), s d Tredithy Hero (28675).

II. (£5).—HARRY BREWER HASKELL, Watsons, Belsford, Harberton, near Totnes, **Langland Princess 13th**, born 5th January, 1928; bred by W. G. Acreman, Langland Farm, Calcott; s Langland Sambo (847), d Luson Princess 4th (104432).

III. (£2).—R. GYNN & SON, Treslay, Camelford, Cornwall, **Hendra Susie 15th** (D. 18), born 2nd January, 1927, bred by W. Stephens, St. Mabyn s Westpetherwin Sunstar (B. 473), d Hendra Susie 11th (C. 1500), s d St. Teath What's Wanted 1st (19223).

CLASS 182.—*Large Black Breeding Sow, not exceeding 12 months old on May 1, 1930. [6 entries.]*

I. (£7) and Silver Medal†—JOHN H. GLOVER, J.P., Cornwood, S. Devon, **Cornwood Lass 100th** (F. 1116), born 1st July, 1929; s Cornwood Valesman (C. 871), d Cornwood Lass 89th (C. 3016), s d Martham Marvel (22073).

II. (£4).—R. GYNN & SON, Treslay, Camelford, Cornwall, **Treslay Lass 8th** (F. 1004), born 2nd July, 1929; s Hendra Sunstar (D. 5), d Treslay Sapphire 1st (C. 7866), s d Treslay Blue Blood 1st (B. 477).

III. (£2).—HARRY E. BASTARD, Tinten Manor, St. Tudy, Cornwall, **Penhale Polly 5th** (F. 1052), born 10th May, 1929, bred by John Knowles, Penhale, St. Tudy; s Fentongollan Result 6th (31229), d Penhale Pretty (A. 5346), s d Cornwood J.P. 2nd (28949).

CLASS 183.—*Large Black Breeding Sow, farrowed in 1930. [6 entries].*

I. (£7).—JOHN H. GLOVER, J.P., Cornwood, S. Devon, **Cornwood Nancey 3rd** (G. 26), born 2nd January; s Patshull Monarch 1st (D. 425), d Cornwood Lass 98th (E. 1976), s d Langland Sambo (C. 847).

II. (£4).—JOHN WARNE & SON, Tregonhayne Manor, Tregony, Grampound Road, Cornwall, **Trevellos Biddy 2nd** (G. 6), born 3rd January; s Trevellos Felix 3rd (A. 1259), d Banns Biddy 2nd (C. 4332), s d Fentongollan Amir 2nd (B. 429).

III. (£2).—Ditto, ditto, **Trevellos Biddy 1st** (G. 4), born 3rd January; s Trevellos Felix 3rd (A. 1259), d Banns Biddy 2nd (C. 4332), s d Fentongollan Amir 2nd (B. 429).

† For Best Sow in the Large Black Classes.

## LARGE WHITE.

(£10 towards the Prizes in these Classes and the Medals were given by the National Pig Breeders' Association).

**CLASS 184.**—*Large White Boar, farrowed before July 1, 1929.*  
[6 entries.]

**I. (£8)** and Silver Gilt Medal\*—**E. R. DEBENHAM**, Bladen Estate, Briantspuddle, Dorset, **Forest Bradbury 2nd** (E.M. 410), born 14th March, 1927, bred by R. W. Carson, 3, Gloucester Gate, Regents Park, N.W.1; s Edmonton Bradbury 2nd (H.B. 60681), d Forest Amy 11th (H.B. 169618), s d Turk of Bottesford (H.B. 27417).

**II. (£5)** and R. for Silver Gilt Medal\*—**W. WHITE & SON**, Taunton, **Fen Bradbury 10th**, born 11th January, 1927, bred by F. Laud, Bourne, Lincs., s Bourne Bradbury 63rd (55901), d Bourne Bonetta 129th (156640), s d Bourne King David (36437).

**III. (£2).**—**JOHN PIERPONT MORGAN**, Estate Office, Wall Hall, Watford, **Bourne King David 218th** (55953), born 25th July, 1925, bred by the late Edmund Wherry, Bourne, Lincs.; d Bourne King David 20th (40527), d Bourne Champion Queen 5th (76980), s d Sapperton Boy (24471).

**R.**—**THE MARDEN PEDIGREE PIG CO., LTD.**, Marden Mill, near Devizes, Wilts, **Walton Bandmaster 33rd** (66153), born 1st July, 1927, bred by The Lord Daresbury, C.V.O., Walton Hall, Warrington, Lanes.; s Walton Bandmaster 13th (53873), d Walter Primrose 50th (161588), s d Bourne King David 52nd (47549).

**C.**—**WALTER W. RYMAN**, Wall, Lichfield, Staffs, **Wall Jay 27th** (66101), born 2nd July, 1927; s Spalding Jay 11th (43257), d Wall Catalina 11th (149382), s d Banner of Wall (40079).

**CLASS 185.**—*Large White Boar, farrowed on or after July 1, 1929.*  
[7 entries.]

**I. (£7).**—**W. WHITE & SON**, Taunton, **Taunton Bradbury 21st** (Vol. 47), born 5th July, 1929; s Fen Bradbury 10th (60773), d Taunton Royal Amy 2nd (131942), s d Spalding Signal (34103).

**II. (£4).**—**WALTER W. RYMAN**, Wall, Lichfield, Staffs, **Wall Lion 15th** (Vol. 47), born 25th July, 1929; s Wall Lion 3rd (66141), d Wall Surprise 10th (Vol. 46), s d Bourne King David 12th (40515).

**III. (£2).**—**JOHN PIERPONT MORGAN**, Estate Office, Wall Hall, Watford, **Aldenham Burglar** (Vol. 47), born 3rd July, 1929; s Aldenham General (Vol. 46), d Bourne Bonetta 133rd (156644), s d Bourne Bradbury (40429).

**R.**—**THE MARDEN PEDIGREE PIG CO., LTD.**, Marden Mill, near Devizes, Wilts, **Woodborough Bandmaster 18th** (Vol. 47), born 1st July, 1929; s Walton Bandmaster 33rd (66153), d Edmonton Queen 6th (179732), s d Bourne King David 145th (52353).

**C.**—**E. R. DEBENHAM**, Bladen Estate, Briantspuddle, Dorset, (1146), born 21st August, 1929; s Kimpton Jay (H.B. 61259), d Bladen Bonetta 8th (Vol. 46), s d Bourne Bradbury 73rd (H.B. 55913).

**CLASS 186.**—*Large White Breeding Sow, farrowed before 1929.*  
[5 entries.]

**I. (£8).**—**W. WHITE & SON**, Taunton, **Bourne Bonetta 129th** (156640), born 26th February, 1925, bred by E. Wherry, Bourne, Lincs.; s Bourne King David (36437), d Bourne Bonetta 27th (103300), s d Bourne Champion Boy (33091).

\* Silver Gilt Medal value £2 10s. (or cash) for the Best Boar in the Large White Classes.



**II. (£5.)**—JOHN PIERPONT MORGAN, Estate Office, Wall Hall, Watford, **Aldenham Belle 72nd** (178388), born 6th February, 1927; s Sundon Bar None (57815), d Aldenham Belle 9th (102290), s d Aldenham Bright Boy (36077).

**III. (£2.)**—E. HOSKING, junr., Pulsack, Hayle, Cornwall, **Hallastone Fuchsia 4th** (H.B. 46, 1374), born 24th January, 1927, bred by W. Hallas, Bank House Farm, Helsby; s Duston Baron 10th (Vol. 43), d Duston Catalina 2nd (Vol. 43), s d Duston Delegate 3rd (41107).

**CLASS 187.**—*Large White Breeding Sow, farrowed on or after January 1, and before July 1, 1929.* [10 entries.]

**I. (£7)** and Silver Gilt Medal†—W. WHITE & SON, Taunton, **Taunton East Lass 8th** (Vol. 47), born 3rd January, 1929; s Duston Delegate 18th (52719), d Histon East Lass 11th (47038), s d Histon Wonder (33677).

**II. (£4.)**—JOHN PIERPONT MORGAN, Estate Office, Wall Hall, Watford, **Spalding Superior 6th** (Vol. 46), born 12th January, 1929, bred by Alfred W. White, Hillegom, Spalding, Lincs.; s Caldmore Expectation 2nd (60279), d Rodbaston Superior 16th (148474), s d Caldmore Comet 4th (40704).

**III. (£2.)**—W. WHITE & SON, **Taunton Champion Bonetta 3rd** (Vol. 47), born 12th January, 1929; s Duston Delegate 18th (52719), d Bourne Bonetta 129th (156640), s d Bourne King David (36437).

**R.**—THE MARDEN PEDIGREE PIG CO., LTD., Marden Mill, near Devizes, Wilts, **Woodborough Belle 24th** (Vol. 46), born 26th January, 1929; s Taunton Jay 38th (53693), d Histon Belle 137th (170260), s d Bourne King David 198th (52377).

**C.**—Sir G. A. COOPER, Bart., Hursley Park, Winchester, Hants, **Farley Bonetta 7th** (Ear No. 200), born 11th May, 1929; s Plain Signal 4th (61721), d Bourne Bonetta 26th (103298), s d Bourne Champion Boy (33091).

**CLASS 188.**—*Large White Breeding Sow, farrowed after July 1, 1929.* [10 entries.]

**I. (£7)** and R. for Silver Gilt Medal†—W. WHITE & SON, Taunton, **Taunton Amy 140th** (Vol. 47), born 5th July, 1929; s Fen Bradbury 10th (60773), d Taunton Royal Amy 2nd (131942), s d Spalding Signal (34103).

**II. (£4.)**—Mrs. SOFER WHITBURN, Amport St. Marys, Andover, Hants, **Amport Lily 9th** (152, Vol. 47), born 13th July, 1929; s Westacre Layman 9th (54017), d Amport Lily 3rd (178520), s d Armadale Jay 80th (52125).

**III. (£2.)**—E. R. DEBENHAM, Bladen Estate, Briantspuddle, Dorset (No. 1019), born 11th July, 1929; s Edmonton King David 94th (64799), d Bushes Lily 24th (Vol. 46), s d Bushes Turk 31st (60261).

**R.**—Sir G. A. COOPER, Bart., Hursley Park, Winchester, Hants, **Farley Primrose 51st** (Ear No. 216), born 19th August, 1929; s Plain Signal 4th (61721), d Farley Primrose 7th (169462), s d Histon Baron 6th (53025).

**H.C.**—JOHN PIERPONT MORGAN, Estate Office, Wall Hall, Watford, **Aldenham B. Queen 7th**, born 1st July, 1929; s Aldenham General (Vol. 46), d Whittingham B. Queen (182818), s d Sundon Bar None (57815).

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† Silver Gilt Medal value £2 10s. (or cash) for the Best Sow in the Large White Classes.

## MIDDLE WHITE.

(£10 towards the Prizes in these Classes and the Medals were given by the National Pig Breeders' Association).

CLASS 189.—*Middle White Boar, farrowed before July 1, 1929.*

[7 entries.]

**I. (£8) and Silver Gilt Medal\***—Mrs. SOFER WHITBURN, Amport St. Marys, Andover, Hants, **Salts Illuminator** (59449), born 28th January, 1926, bred by A. Leney, Chestercourt, Edenbridge, Kent; s Wharnccliffe Prince (32625), d Wharfedale Helah (101474), s d Wharfedale Deliverance (32575).

**II. (£5.)**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, **Pendley Apache**, born 13th January, 1927, bred by Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring; s Histon Woodman 28th (59057), d Whitehill Rovers Choice (155338), s d Histon Rover 48th (44581).

**III. (£2.)**—Miss R. B. BABCOCK, Shawlands, Lingfield, Surrey, **Canford Shrewsbury** (66687), born 28th January, 1928, bred by Canford Schools, Wimborne, Dorset; s Hammonds Hivite 8th (63311), d Wattle Alice 4th (166524), s d Southmore Shrewsbury (39489).

**R.**—Mrs. HAYES SADLER, Roundstone Farm, Ferring, Sussex, **Norsbury Jupiter**, born 15th February, 1928; s Norsbury Charles (63593), d Athara of Norsbury (111222), s d Pendley Beenham (35555).

**V.H.C.**—EDWARD MAURICE JOWITT, Strode Manor, Bridport, Dorset, **Norsbury Woodman 8th** (67061), born 14th September, 1927, bred by Mrs. Hayes Sadler, Roundstone Farm, Ferring, Sussex; s Norsbury Hivite (59267), d Norsbury Welcome 17th (165150), s d Norsbury Harold (50791).

**C.**—W. C. BADCOCK, Middle Colenso, Marazion, **Shawlands Prince Palatine**, born 4th January, 1929, bred by Miss R. B. Babcock, Shawlands, Lingfield, Surrey; s Salts Prince (67189), d Shawlands Dorothy (185258), s d Hawthorne Sultan 15th (54669).

CLASS 190.—*Middle White Boar, farrowed on or after July 1, 1929.*

[8 entries.]

**I. (£7) and R. for Silver Gilt Medal\***—Miss R. B. BABCOCK, Shawlands, Lingfield, Surrey, **Shawlands Bold Boy 2nd**, born 3rd July, 1929; s Shawlands Bold Boy (67965), d Shawlands Gracious Lady (185274), s d Benjamin of Godersham 2nd (49357).

\* Silver Gilt Medal value £2 10s. (or cash) for the Best Boar in the Middle White Classes.

**II. (£4.)**—Mrs. SOFER WHITBURN, Amport St. Marys, Andover, Hants, **Amport Illuminator 3rd** (2412, Vol.), born 13th July, 1929; s Salts Illuminator (59449), d Amport Peerless 21st (183336), s d Amport Ranger (62885).

**III. (£2.)**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, **Pendley Clinker**, born 2nd July, 1929; s Wiggan Hall Clinker 6th, d Pendley Lady Choice, s d Whitehill Hasty 4th (59747).

**R.**—EDWARD MAURICE JOWITT, Strode Manor, Bridport, Dorset, **Burford David**, born 27th August, 1929; s Norsbury Woodman 8th (67061), d Burford Eve (174452), s d Wharfedale Ignescens (55385).

**V.H.C.** Ditto, ditto, **Burford Job**, born 23rd July, 1929; s Norsbury Woodman 8th (67061), d Highbeech Hagar 4th (184180), s d Salts Deliverance 8th (55145).

**H.C.** F. N. P. BROWNE, Woodhayes, Whimble, Devon, **Whimble Perfection's Pride**, born 24th September, 1929; s Burford Ken, d Burford Azalea 3rd s d Wharfedale Ignescens.

CLASS 191.—*Middle White Breeding Sow. farrowed before 1929.*

[6 entries.]

**I. (£8).** and Silver Gilt Medal†—Miss R. B. BARCOCK, Shawlands, Lingfield, Surrey, **Hammonds Gracious 13th** (163716), born 15th March, 1925, bred by H. R. Beeton, Hammonds, Checkendon, Reading; s Hammonds Hivite (31661), d Hammonds Gracious (316822), s d Wharfedale Hector (35879).

**II. (£5.)**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, **Pendley Princess 5th**, born 3rd January, 1928, bred by Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring; s Salts Prince 7th (63787), d Whitehill Hagar 5th (143958), s d Pendley Warrior (45899).

**III. (£2.)**—Mrs. HAYES SADLER, Roundstone Farm, Ferring, Sussex, **Salts Choice 22nd** (177254), born 14th July, 1926, bred by Mrs. Leney; s Wharncliffe Prince (32625), d Oxney Choice 5th (121344), s d Oxney Revel (35505).

**R.**—Mrs. SOFER WHITBURN, Amport St. Marys, Andover, Hants, **Amport Fuchsia 7th** (183322), born 20th May, 1927; s Wharfedale Jamieson 3rd (28341), d Amport Fuchsia 4th (162260), s d Scotty of Norsbury (46323).

**V.H.C.**—EDWARD MAURICE JOWITT, Strode Manor, Bridport, Dorset, **Burford Jill** (183510), born 1st January, 1928; s Burningfold Perfections Pride 3rd (63007), d Burford Brilliance (162708), s d Wharfedale Ignescens (55385).

**H.C.**—W. R. ARBUTHNOT, Plawhatch Farm, Sharpthorne, near East Grinstead, Sussex, **Plawhatch Viscountess 5th** (Vol. 46), born 4th January, 1928; s Plawhatch Hagars Oarsman (63679), d Plawthorne Viscountess 4th (185048), s d Albany Sunflowers Viscount (49179).

† Silver Gilt Medal value £2 10s (or cash) for the Best Sow in the Middle White Classes

CLASS 192.— *Middle White Breeding Sow, farrowed on or after January 1, and before July 1, 1929.* [7 entries.]

**I. (£7)** and R. for Silver Gilt Medal†—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, **Pendley Princess 8th** (244), born 3rd January, 1929, bred by Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring; s Salts Deliverance 8th (55145), d Whitehill Hagar 5th (143958), s d Pendley Warrior (45899).

**II. (£4.)**—Mrs. SOFER WHITBURN, Amport St. Marys, Andover, Hants, **Amport Cubist 9th** (2170, Vol. 47), born 1st January, 1929; s Salts Illuminator (59449), d Caroline of Norsbury 6th (134558).

**III. (£2.)**—Sir GOMER BERRY, Bart., **Pendley Princess 7th** (246), born 3rd January, 1929, bred by Major J. A. Morrison, D.S.O., Pendley Stock Farms, Tring; s Salts Deliverance 8th (55145), d Whitehill Hagar 5th (143958), s d Pendley Warrior (45899).

**R.**—Mrs. HAYES SADLER, Roundstone Farm, Ferring, Sussex, **Norsbury Welcome 43rd**, born 11th January, 1929; s Norsbury John (63603), d Norsbury Welcome 10th (139820), s d Norsbury Vaughan (39201).

**V.H.C.**—EDWARD MAURICE JOWITT, Strode Manor, Bridport, Dorset, **Burford Lots**, born 1st March, 1929; s Norsbury Woodman 8th (67061), d Burford Molly.

**C.**—W. R. ARBUTHNOT, Plawhatch Farm, Sharpthorne, near East Grinstead, Sussex, **Plawhatch Hagars Choice** (Vol. 46), born 10th January, 1929; s Plawhatch Salopian (55063), d Whitehill Hagars Choice 16th (155334), s d Hammonds Hasty (44349).

CLASS 193.— *Middle White Breeding Sow, farrowed after July 1, 1929.* [6 entries].

**I. (£7.)**—Mrs. HAYES SADLER, Roundstone Farm, Ferring, Sussex, **Norsbury Delves 13th**, born 2nd July, 1929; s Norsbury Jupiter, d Norsbury Delves 5th, s d Norsbury Hivite (59267).

**II. (£4.)**—Sir GOMER BERRY, Bart., Pendley Stock Farms, Tring, **Pendley Princess 13th** (280), born 3rd July, 1929; s Salts Deliverance 8th (55145), d Whitehill Hagar 5th (143958), s d Pendley Warrior (45899).

**III. (£2.)**—Miss R. B. BABCOCK, Shawlands, Lingfield, Surrey, **Shawlands Choice Girl 7th** (Vol. 47), born 6th July, 1929; s Shawlands Bold Boy (67965), d Compton Choice 5th (174864), s d Hammonds Herald (44353).

**R.**—Mrs. SOFER WHITBURN, Amport St. Marys, Andover, Hants, **Amport Bettina 3rd** (2346, Vol. 47), born 1st July, 1929; s Amport Scotty 11th (62899), d Salts Bettina 8th (16588), s d Wharfedale Deliverance (32575).

**V.H.C.**—Sir GOMER BERRY, Bart., **Pendley Princess 12th** (279), born 3rd July, 1929; s Salts Deliverance 8th (55145), d Whitehill Hagar 5th (143958), s d Pendley Warrior (45899).

† Silver Gilt Medal value £2 10s. (or cash) for the Best Sow in the Middle White Classes.

## TAMWORTH.

CLASS 194. *Tamworth Boar, any age.* [5 entries.]

**I. (£7.)**—LT.-COL. C. J. H. WHEATLEY, Berkswell Hall, Warwickshire, **Wall Milton**, born 28th April, 1929, bred by W. W. Ryman, Wall, Lichfield; s Hookstile Red Start, d Whellingham Sally, s d Caldmore Joe (64165).

**II. (£4.)** EDWARD CLIFTON-BROWN, Burnham Grove, Burnham, Bucks, **Milton Prince 2nd** (66503), born 20th April, 1927, bred by C. L. Coxon, Pembroke; s Basildon Golden Prince 7th (47071), d Basildon Reflection 8th (144680), s d Milton Bishop 2nd (36041).

**III. (£2.)** WALTER W. RYMAN, Wall, Lichfield, Staffs., **Hookstile Red Start** (Vol. 46), bred by T. H. Stephens, Farnham, Surrey; s Berkswell Red Start (66473), d Hookstile Duchess 4th (178232), s d Roxley Edward 3rd (47155).

**R.** E. R. DEBENHAM, Bladen Estate, Briantspuddle, Dorset, **Bladen Bass** (E.M. 137), born 24th January, 1928; s Berkswell Bass (55547), d Basildon Brilliant 13th (155654), s d Knowle Newcastle (47143).

**H.C.**—W. A. BINDLEY, Woodbourne, Augustus Road, Edgbaston, **Pamington Golden Eagle**, born 7th June, 1929; s Peardown Patriot, d Berkswell Clodagh, s d Basildon Tommy Kirman.

CLASS 195. *Tamworth Breeding Sow, farrowed in or before 1930.*  
[5 entries.]

**I. (£7) and Bronze Medal\*** WALTER W. RYMAN, Wall, Lichfield, Staffs., **Bladen Brilliant 5th** (Vol. 46), born 27th March, 1929, bred by E. R. Debenham, Briantspuddle, Dorchester; s Berkswell Bass (55547), d Basildon Brilliant 10th (155648), s d Knowle Newcastle (47143).

**II. (£4.) and R. for Bronze Medal\*** LT.-COL. C. J. H. WHEATLEY, Berkswell Hall, Warwickshire, **Berkswell Gloriana**, born 6th January, 1929; s Basildon Tommy Kirman 10th (64139), d Milton Bess 33rd (178284), s d Milton Bess 2nd (144768).

**III. (£2.)**—Ditto, ditto, **Berkswell Constance 7th** (183112), born 10th January, 1928; s Verzons Red Gauntlet (59881), d Berkswell Constance (167214), s d Knowle Councillor (59861).

**R.** W. A. BINDLEY, Woodbourne, Augustus Road, Edgbaston, **Berkswell Constance 4th**, born 25th July, 1927, bred by Col. C. H. Wheatley, Berkswell Hall; s Verzons Red Gauntlet (59881), d Berkswell Constance (167214), s d Knowle Counsellor (59861).

\* Given by the National Pig Breeders' Association, a **Bronze Medal for the Best Animal** in the Tamworth Classes.

## GLOUCESTERSHIRE OLD SPOTS.

(£16 towards the Prizes in these Classes were given by the Gloucestershire Old Spots Pig Society).

CLASS 196. *Gloucestershire Old Spots Boar, farrowed before July 1, 1929.* [6 entries.]

**I. (£10)** and Champion† and R. for Champion\*—W. T. & A. G. BAILEY, Grist House Farm, Hemel Hempstead, **Hempstead Jim 17th** (5888), born 20th May, 1929; s Hempstead Jim 12th (5808), d Hempstead Daphne 21st (2047), s d Hempstead General (5498).

**II. (£5.)** Ditto, ditto, **Hempstead Jim 12th** (5808), born 4th January, 1928; s Holmwood Wight (5657), d Hempstead Daphne 13th (X759), s d Hempstead General (5498).

**III. (£2.)** HENRY RIBTON McCracken, Beara Farm, Pilton, Barnstaple, **Holmwood Lilywhite 2nd** (5813), born 13th January, 1928, bred by Stanley Badock, Holmwood, Westbury-on-Trym, Bristol; s Maiden Bradley Judge (5598), d Holmwood Beam (X 809), s d Thornbury Buffalo (5542).

**R.** SHERRIFF & SONS, Lemsford, Hatfield, Herts, **Hempstead Spot** (5619), born 1st January, 1926, bred by W. T. & A. G. Bailey, Grist House Farm, Hemel Hempstead; s Hempstead General (5498), d Hempstead Daphne 2nd (17554), s d Clevehill Jim (4757).

**C.** —JAMES D. BEAK, Maiden Bradley, Frome, **Maiden Bradley Baltic**, born 15th February, 1929; s Maiden Bradley Emperor, d Maiden Bradley Moonlight 4th.

CLASS 197. *Gloucestershire Old Spots Boar, farrowed on or after July 1, 1929.* [3 entries.]

**I. (£7)** and R. for Champion† —SHERRIFF & SONS, Lemsford, Hatfield, Herts, **Nashes Duke 17th** (5893), born 6th July, 1929; s Hempstead Spot (5619), d Nashes Duchess 27th (X 497), s d Nashes Premier 2nd (5423).

**II. (£4.)** —W. T. & A. G. BAILEY, Grist House Farm, Hemel Hempstead, **Hempstead Jim 18th** (5889), born 2nd November, 1929; s Hempstead Jim 12th (5808), d Hempstead Daphne 27th (Z 241), s d Holmwood Wight (5657).

**R.** —HENRY RIBTON McCracken, Beara Farm, Pilton, Barnstaple, **Beara Laddie**, born 10th November, 1929; s Holmwood Lilywhite 2nd (5813), d Ashford June Lass (Z 123), s d Maiden Bradley Supreme (5689).

\* Given through the Gloucestershire Old Spots Pig Society, the George Watson Challenge Cup, value £21, for the Best Animal in the Gloucestershire Old Spots Classes. (The Cup to be won three times by the same Exhibitor with different Animals before becoming his own property).

† Given by F. H. Turnbull, Esq., the Turnbull Cup, value £14 14s., for the Best Boar in the Gloucestershire Old Spots Classes. (The Cup to be won twice by the same Exhibitor with different Animals before becoming his own property).

CLASS 198.—*Gloucestershire Old Spots Breeding Sow, farrowed before 1929.* [5 entries.]

I. (£10) and Champions\*†.—HENRY RIBTON McCracken, Beara Farm, Pilton, Barnstaple. **Beara Sauce** (Z 425), born 16th August, 1928; s Ashford June Lad (5760), d Maiden Bradley Stylish 6th (Z 151), s d Thornbury Bison (5554).

II. (£5).—JAMES D. BEAK, Maiden Bradley, Frome, **Maiden Bradley Moonlight 4th**; s Thornbury Bison (5554), d Maiden Bradley Maid 2nd (17491), s d Ashton Dapper (4627).

III. (£2).—SHERRIFF & SONS, Lemsford, Hatfield, Herts, **Nashes Blossom 27th** (Z. 307), born 12th January, 1928; s Nashes Duke 8th (5646), d Nashes Blossom 15th (17229), s d Ayot Premier (4871).

R.—T. P. P. KENT, Ashford House, Barnstaple, **Ashford Realisation**, born 1st September, 1928; s Holmwood Buffalo 7th (5714), d Maiden Bradley Anticipation 4th (Z. 312), s d Thornbury Bison (5554).

CLASS 199.—*Gloucestershire Old Spots Breeding Sow, farrowed in 1929.* [5 entries.]

I. (£7) and R. for Champion†.—W. T. & A. G. BAILEY, Grist House Farm, Hemel Hempstead, **Hempstead Daphne 38th** (Z. 434), born 3rd January; s Holmwood Wight (5657), d Hempstead Daphne 3rd (X. 540), s d Nashes Major 1st (4945).

II. (£4).—SHERRIFF & SONS, Lemsford, Hatfield, Herts, **Nashes Duchess 45th** (Z. 440), born 1st January; s Hempstead Spot (5619), d Nashes Duchess 40th (Z. 279), s d Eastcott Defiance (5607).

III. (£2).—HENRY RIBTON McCracken, Beara Farm, Pilton, Barnstaple, **Beara Memory** (Z. 441), born 6th January; s Holmwood Lilywhite 2nd (5873), d Beara Melody (Z. 294), s d Holmwood Buffalo 7th (5715).

R.—JAMES D. BEAK, Maiden Bradley, Frome, **Maiden Bradley Star**, born 10th June; s Maiden Bradley Emperor 4th, d Maiden Bradley Maid 13th.

C.—Alderman HENRY MATTHEWS, Down Farm, Winterbourne, Bristol, **Winterbourne Wallflower 4th** (Z. 449), born 1st March; s Knowle Joe (5781), d Winterbourne Wallflower (X. 994), s d Eastcott Rogue (5394).

CLASS 200.—*Pair of Gloucestershire Old Spots Breeding Sows, farrowed in 1930.* [3 entries.]

I. (£7).—SHERRIFF & SONS, Lemsford, Hatfield, Herts, **Nashes Blossom 28th** and **29th** (2535 and 2536), born 3rd January; s Holmwood Wight (5657), d Nashes Blossom 27th (Z. 307), s d Nashes Duke 8th (5646).

II. (£4).—W. T. & A. G. BAILEY, Grist House Farm, Hemel Hempstead, **Hempstead Daphne 40th** (Z. 531) and **Hempstead Daphne 41st** (Z. 532), born 1st January; s Hempstead Jim 12th (5808), d Hempstead Daphne 3rd (X. 540), s d Nashes Major 1st (4945).

R.—HENRY RIBTON McCracken, Beara Farm, Pilton, Barnstaple, **Beara Sally** and **Beara Saucer**, born 12th January; s Holmwood Lilywhite 2nd (5813), d Beara Sauce (Z. 425), s d Ashford June Lad (5760).

\* Given through the Gloucestershire Old Spots Pig Society, the George Watson Challenge Cup, value £21, for the Best Animal in the Gloucestershire Old Spots Classes. (The Cup to be won three times by the same Exhibitor with different Animals before becoming his own property).

† Given by Messrs. Bennett and Howard, the Sir John Anderson Cup for the Best Sow in the Gloucestershire Old Spots Classes. (The Cup to be won three times by the same Exhibitor before becoming his own property).

## WESSEX SADDLEBACK.

(£10 towards the Prizes in these Classes and the Silver Medals were given by the National Pig Breeders' Association, and all Pigs exhibited must have been entered or eligible for entry in the Herd Book).

CLASS 201.—*Wessex Saddleback Boar, farrowed before July 1, 1929.*  
[4 entries.]

I. (£8) and Silver Medal\*—WILLIAM H. G. BURFITT, Walters Farm, North Bruham, Bruton, Somerset, **Slythehurst Charles** (3239), born 8th January, 1928, bred by Dr. W. H. Forshaw, Slythehurst, Ewhurst, Guildford; s Carlos of Slythehurst (3024), d Slythehurst (Hintz (13908), s d Slythehurst Bar None (2336).

II. (£5).—WM. HY. TOLLEY, Pitt Farm, Culmstock, Devon, **Culm Valley Ariel** (3190), born 25th March, 1928; s Balsbury Louis (2702), d Culm Valley Belle 15th (13243), s d Royston Caesar (1531).

III. (£2).—W. M. G. SINGER, Norman Court, Salisbury, **Holbury Tim** (3185), born 6th January, 1928, bred by G. R. Southwell, Holbury Farm, Lockerley, Romsey; s Awebridge Standard (2646), d Holbury Sylvia (6401), s d Norman Perfection (660).

R. Col. G. H. MYTTON, Chadlington Downs, Chipping Norton, Oxon, **Besford Hero 3rd** (3376), born 18th January, 1929, bred by H. Harris, Besford, Dafford, Worcester; s Offa Hero 1st (1914), d Besford Brenda 7th (13751), s d Southeroft Stonecracker (2690).

CLASS 202.—*Wessex Saddleback Boar, farrowed on or after July 1, 1929.* [6 entries.]

I. (£7) and R. for Silver Medal\*—H. L. BROOKSBANK, Sandrock, Tickhill, W. Yorks, **Sandrock Moonraker 2nd**, born 22nd July, 1929; s Pipers Barbarian (3147), d Imber Helen (14592), s d Bromham General (2880).

II. (£4).—WM. HY. TOLLEY, Pitt Farm, Culmstock, Devon, **Culm Valley, Bob**, born 30th November, 1929; s Culm Valley Ariel (3190), d Culm Valley Belle 17th (14007), s d Royston Caesar (1531).

III. (£2).—G. R. SOUTHWELL, Holbury Farm, Lockerley, Romsey, **Holbury Resolute**, born 24th July, 1929; s Awebridge Standard (2646), d Holbury Reliance (14783), s d Ayot Beau Brocade (1619).

R.—HENRY LOOSEMORE, Holmsleigh, Cotleigh, Honiton, Devon, **Holmsleigh Golden Arrow** (3351), born 12th September, 1929; s Holmsleigh Jumbo (3202), d Allerton Dewdrop 2nd (14302), s d Aldon Hedgehog (2876).

CLASS 203.—*Wessex Saddleback Breeding Sow, farrowed before 1929.*  
[10 entries.]

I. (£8) and Silver Medal†—H. L. BROOKSBANK, Sandrock, Tickhill, W. Yorks, **Sandrock Star 1st** (14376), born 14th August, 1926; s Welwyn Rufus (2502), d Ashe Star 5th (12029), s d Ashe Mac 2nd (680).

II. (£5).—Col. G. H. MYTTON, Chadlington Downs, Chipping Norton, **Holbury Break of Day** (14732), born 6th January, 1928, bred by R. Southwell, Holbury Farm, Lockerley, Hants; s Awebridge Standard (2646), d Holbury Sylvia (6401), s d Norman Perfection (660).

\* Silver Medal for the Best Boar exhibited in the Wessex Saddleback Classes

† Silver Medal for the Best Sow exhibited in the Wessex Saddleback Classes



**III. (£2).**—G. R. SOUTHWELL, Holbury Farm, Lockerley, Romsey, **Holbury Early Morn** (14731), born 6th January, 1928; s Awebridge Standard (2646), d Holbury Sylvia (6401), s d Norman Perfection (660).

**R.**—Major ALAN R. WHITTINGTON, Yarty, Axminster, Devon, **Yarty Dinah 5th** (15041), born 19th October, 1927; s Yarty Monarch (3188), d Yarty Dinah 4th (13663), s d Yarty Prince 5th (2827).

**H.C.**—F. E. PYLE, Long Park, Sidmouth Junction, Honiton, **Coombe Cot Fiffinella** (13884), born 11th January, 1927, bred by Major Vere Webb, Coombe Cot, Honiton; s Archer of Sockhill (2750), d Coombe Cot Sunny Jane (12978), s d Holnest Tarazia.

**CLASS 204.—Wessex Saddleback Breeding Sow, farrowed in 1929.**

[10 entries.]

**I. (£7)** and **R.** for Silver Medal† G. R. SOUTHWELL, Holbury Farm, Lockerley, Romsey, Hants, **Holbury Effie** (15241), born 6th January; s Awebridge Standard (2646), d Holbury Eclipse (14735), s d Holbury Lagonda (2444).

**II. (£4).**—Col. G. H. MYTTON, Chadlington Downs, Chipping Norton, **Godalming Eve 7th** (15045), born 15th March, bred by A. Freeland, Billingbear Farm, Binfield, Berks; s Godalming Masterpiece (3037), d Godalming Eve (13420), s d Shillinglee Apollo (2001).

**III. (£2).**—H. L. BROOKSBANK, Sandrock, Tickhill, W. Yorks, **Sandrock Duchess 1st**, born 3rd July; s Pipers Barbarian (3147), d Sherwood Marchioness (13942), s d Slythehurst Present King (2361).

**R.**—G. R. SOUTHWELL, **Holbury Edie** (15240), born 6th January; s Awebridge Standard (2646), d Holbury Eclipse (14735), s d Holbury Lagonda (2444).

**V.H.C.**—WM. HY. TOLLEY, Pitt Farm, Culmstock, Devon, **Culm Valley Bella** (15225), born 19th January; s Balsbury Louis (2702), d Culm Valley Belle 4th (5353).

**H.C.**—Col. G. H. MYTTON, **Garth Ena** (15237), born 3rd January; s Pipers Titan (3029), d Godalming Eve 3rd (13423), s d Cattistock Mighty Atom (2355).

**CLASS 205.—Wessex Saddleback Breeding Sow, farrowed in 1930.**

[10 entries.]

**I. (£7).**—F. E. PYLE, Long Park, Sidmouth Junction, Honiton, **Long Park Dinkle**, born 2nd January; s Vane of Long Park (3228), d Long Park Dewdrop (13808), s d Archer of Sockhill (2750).

**II. (£4).**—Ditto, ditto, **Long Park Dorrie**, born 2nd January; s Vane of Long Park (3228), d Long Park Doris (13808), s d Archer of Sockhill (2750).

**III. (£2).**—Major ALAN R. WHITTINGTON, Yarty, Axminster, Devon, **Yarty Daisy 11th**, born 7th January; s Rookhill Rex (3260), d Yarty Daisy 5th (11785), s d Yarty Prince 2nd (1301).

**R.**—G. R. SOUTHWELL, Holbury Farm, Lockerley, Romsey, Hants, **Holbury Eve**, born 10th January; s Norman Duke (3235), d Holbury Eclipse (14735), s d Holbury Lagonda (2444).

**V.H.C.**—Ditto, ditto, **Holbury Shaun**, born 31st January; s Norman Duke (3235), d Holbury Sublime (14729), s d Ayot Beau Brocade (1619).—WM. HY. TOLLEY, Pitt Farm, Culmstock, Devon, **Culm Valley Norah**, born 30th January; s Culm Valley Rover, d Culm Valley Belle 18th (14008), s d Balsbury Louis (2702).

**H.C.**—Col. G. H. MYTTON, Chadlington Downs, Chipping Norton, **Garth Alert**, born 15th January; s Awebridge Standard (2646), d Holbury Saffron (14730), s d Ayot Beau Brocade (1619).

† Silver Medal for the Best Sow exhibited in the Wessex Saddleback Classes

## NATIONAL LONG WHITE LOP-EARED.

(£5 towards the Prizes in these Classes and the Silver Medals were given by the National Long White Lop-Eared Pig Society and all Pigs exhibited must have been entered or eligible for entry in the Herd Book).

CLASS 206.---*Long White Lop-Eared Boar, farrowed before July 1, 1929.* [6 entries.]

I. (£8) and Silver Medal\* and R. for Champion† --GEO. HY. EUSTICE, Bezurrell, Gwinear, Hayle, **Afton Gay Boy** (1122), born 15th January, 1926, bred by Pearce & Sons, Afton, Totnes; s Yealmpstone Sunday (958), d Coryton Beauty (2663), s d Coryton General (532).

II. (£5.) --WILLIAM HENRY NEAL, Walreddon Farm, Tavistock, **Yealmpstone Gay Boy 3rd**, born 17th May, 1929; s Yealmpstone Gay Boy 2nd, d Yealmpstone Vanity 2nd.

III. (£2.) --B. J. HOOPFELL, Folly, Bigbury-on-Sea, S. Devon, **Folly Marvel** (1962), born 28th May, 1929; s Elwell Marvel (1780), d Folly Lobelia (5853), s d Godwell Sultan (1114).

R. MARSHALL BROS., Paramount, Ivybridge, **Paramount Surveyor**, born 6th January, 1929, bred by C. Marshall, Paramount; s Devonshire Ladder (1880), d Colwell Beauty 2nd (5366).

CLASS 207. *Long White Lop-Eared Boar, farrowed on or after July 1, 1929.* [6 entries.]

I. (£7) and R. for Silver Medal\* --HENRY J. KINGWELL, Great Aish, South Brent, S. Devon, **Devonshire Leader**, born 1st November, 1929; s Devonshire Ladder (1880), d Devonshire Duchess (2165), s d Yealmpstone Pan Yan.

II. (£4.) WM. J. WESTLAKE, Godwell, Ivybridge, **Godwell Marvel**, born 2nd January, 1930; s Folly Merryman, d Godwell Primrose 4th (5639), s d Godwell Sultan 2nd (1114).

III. (£2.) --G. ROWLAND, Fernbank Hospital, Portsmouth Road, Putney, S.W.15, **Buttaford Champion**, born 2nd August, 1929, bred by G. H. Shephard, Buttaford Farm, North Huish, S. Brent; s Devonshire Ladder (1880), d Colwell Lily (6013), s d Colwell Princess 4th (5359).

R. --BLIGHT BROS., Trowis, Stithians, Perranwell, Cornwall, **Trowis Ben 3rd**, born 24th September, 1929; s Bezurrell Ben 3rd (1606), d Trowis Ruby 11th (4065), s d Trowis Peter (614).

H.C. --MARSHALL BROS., Paramount, Ivybridge, **Paramount Prince 1st** (1960), born 10th July, 1929; s Priory Mill Man, d Colwell Princess 4th (5359).

CLASS 208. --*Long White Lop-Eared Breeding Sow, farrowed before 1929.* [6 entries.]

I. (£8) Silver Medal† and Silver Cup‡ --MARSHALL BROS., Paramount, Ivybridge, **Colwell Princess 4th** (5359), born 20th March, 1925, bred by W. Down, Colwell Farm, Egguckland; s Lukesland Hero (3427), d Colwell Princess 2nd (1191).

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\* Silver Medal for the Best Exhibit in Class 206 or 207.

† Given by the Right Hon. The Lord Mildmay of Flete, a Silver Cup for the Best Pig exhibited in Classes 206 to 210. (The Cup to be won twice by the same exhibitor before becoming his absolute property).

‡ Silver Medal for the Best Exhibit in Classes 208 to 210.

lxxiv *Prizes awarded to National Long White Lop-Eared Pigs.*

**II. (£5.)**—WILLIAM HENRY NEAL, Walreddon Farm, Tavistock, **Larcombe Butterfly 3rd**, born 3rd January, 1928, bred by Mrs. Baker, Larcombe; s Ipplepen Don, d Godwell Butterfly 7th, s d Yealmpstone Ben 3rd.

**III. (£2.)**—WM. J. WESTLAKE, Godwell, Ivybridge, Devon, **Monor Princess 4th** (5249), born 25th April, 1929, bred by S. Harris, Modbury, Devon; s Ipplepen Prince (550).

**R.** BLIGHT BROS., Trowis, Stithians, Perranwell, Cornwall, **Trowis Ruby 50th** (5969), born 28th July, 1928; s Bezurrell Ben 3rd (1606), d Trowis Ruby 36th (5456), s d Devonshire Emperor (1472).

**H.C.**—WILLIAM HENRY NEAL, **Godwell Beauty 16th**, born 10th July, 1927, bred by Mr. Westlake, Godwell Farm; s Godwell Sultan 2nd, d Colwell Bobby.

CLASS 209. *Long White Lop-Eared Breeding Sow, farrowed in 1929. [5 entries.]*

**I. (£7)** and **R.** for Silver Medal† WILLIAM HENRY NEAL, Walreddon Farm, Tavistock, **Yealmpstone Vanity 4th**, born 17th May; s Yealmpstone Gay Boy 2nd, s d Yealmpstone Vanity 2nd.

**II. (£4.)** WM. J. WESTLAKE, Godwell, Ivybridge, **Godwell Princess 14th** (5903), born 3rd January; s Ipplepen Don (1312), d Godwell Princess 15th (4865).

**III. (£2.)**—GEORGE HY. EUSTICE, Bezurrell, Gwinear, Hayle, Cornwall, **Bezurrell Millie 1st** (5879), born 3rd January; s Afton Baron (1604), d Bezurrell Mona (5573), s d Erme Hero 1st (1056).

**R.**—BLIGHT BROS., Trowis, Stithians, Perranwell, Cornwall, **Trowis Ruby 57th**, born 10th February; s Bezurrell Ben 3rd (1606), d Trowis Ruby 32nd (4659), s d Erme Hero 2nd (1058).

**H.C.** GEORGE HY. EUSTICE, **Bezurrell Molly 1st** (5877), born 1st January; s Yealmpstone Captain (1596), d Bezurrell Mona 1st (5575), s d Erme Hero 1st (1056).

CLASS 210. *Long White Lop-Eared Breeding Sow, farrowed in 1930. [5 entries.]*

**I. (£7.)**—GEORGE HY. EUSTICE, Bezurrell, Gwinear, Hayle, Cornwall, **Bezurrell Mona 5th**, born 4th January; s Afton Baron (1604), d Bezurrell Mona (5573), s d Erme Hero 1st (1056).

**II. (£4.)**—Ditto, ditto, **Bezurrell Mona 6th**, born 6th February, bred by —, Shepherd, Butterford, N. Huish; s Afton Baron (1604), d Bezurrell Mona (5573), s d Erme Hero 1st (1056).

**III. (£2.)**—WM. J. WESTLAKE, Godwell, Ivybridge, S. Devon, **Godwell Queen**, born 13th January; s Folly Merryman, d Godwell Princess 15th.

**R.**—BLIGHT BROS., Trowis, Stithians, Perranwell, Cornwall, **Trowis Ruby**, born 12th January; s Marridge Hill Ben 2nd (1684), d Trowis Ruby 50th (5969), s d Bezurrell Ben 3rd (1606).

**H.C.**—MARSHALL BROS., Paramount, Ivybridge.

† Silver Medal for the Best Exhibit in Classes 208 to 210.

## BACON PIGS.

CLASS 211.— *Pair of Pigs of any breed or first cross of two pure breeds (the cross to be stated) between 9 score 10lbs. and 11 score 10lbs. live weight each, best suitable for the Wiltshire cut of Bacon.*  
[6 entries.]

**I. (£5.)**—Sir G. A. COOPER, Bart., Hursley Park, Winchester, Large White.

**II. (£3.)**—The VISCOUNT FOLKESTONE, Longford Estate Office, Alderbury, Salisbury, Large White.

**III. (£2.)**—SEALE HAYNE AGRICULTURAL COLLEGE, Newton Abbot, Long Lop-Eared Sow—Large White Boar.

**R.** The VISCOUNT FOLKESTONE, Large White.

**V.H.C.** GEORGE HY. EUSTICE, Bezurrell, Gwinear, Hayle, National Long White Lop-Eared.

*All Pigs in Class 211 were purchased at the current market price by Messrs. Oake Woods and Co. (Ld.), Gillingham, Dorset, who removed them from the Show, killed and cured the carcasses. Additional prizes were then awarded for the best Bacon after curing.*

**I. (£5.)**—The VISCOUNT FOLKESTONE, Longford Estate Office, Alderbury, Salisbury, Large White.

**II. (£3.)**—Sir G. A. COOPER, Bart., Hursley Park, Winchester, Large White.

**III. (£2.)**—GEORGE HY. EUSTICE, Bezurrell, Gwinear, Hayle, National Long White Lop-Eared.

## PRODUCE.

### CIDER.

(Open to Growers and Makers for Cider made from the juice of apples grown in Great Britain).

CLASS 212.— *Novice Class. Cask of Cider made in 1929 by an Exhibitor who had not previously taken a first prize in any public exhibition.* [15 entries.]

**I. (£5.)**—A. BASTON.

**II. (£3.)**—DARTINGTON HALL (L.D.).

**III. (£2.)**—W. D. DAWE.

**R.**—R. BRUFORD.

**V.H.C.**—E. W. SHINNER.

**H.C.**—W. J. WALDEN.—S. T. WHITE.

(The Prizes in Class 213 were given by the Devon County Agricultural Association).

CLASS 213.— *Cask of Cider, not less than 4½ and not more than 9 gallons, made in 1929 by a Yeoman or Tenant Farmer residing in Devon, from the produce of his own orchards.* [14 entries.]

**I. (£5.)**—A. BASTON.

**II. (£3.)**—E. W. SHINNER.

**III. (£2.)**—W. PRATT.

**R.**—A. J. GILL.

**V.H.C.**—E. J. HILL.

**H.C.**—J. H. PEARSE & SONS.

**C.**—M. J. HUGGINS.

CLASS 214.— *Cask of Cider made in 1929 by an Exhibitor whose main occupation was farming.* [23 entries.]

**I. (£5.)**—F. H. REA.

**II. (£3.)**—A. BASTON.

**III. (£2.)**—W. D. DAWE.

**R.**—R. BRUFORD.

**V.H.C.**—E. W. SHINNER.

**H.C.**—W. J. WALDEN.

**C.**—W. BUTLER.—J. H. PEARSE & SONS.

CLASS 215.—*Cask of Cider, made in 1929, of a specific gravity not exceeding 1.015 at 60 deg. Fahr.* [10 entries.]

**I. (£5.)**—WICKWAR CIDER CO. (LD.).

**II. (£3.)**—H. W. DAVIS.

**III. (£2.)**—PULLIN BROS.

**R.**—W. D. DAWE.

CLASS 216.—*6 Quart Bottles of Cider, made in 1929, of a specific gravity not exceeding 1.015 at 60 deg. Fahr.* [17 entries.]

**I. (£5.)**—PULLIN BROS.

**II. (£3.)**—WICKWAR CIDER CO. (LD.).

**III. (£2.)**—H. W. DAVIS.

**R.**—MITCHELL, TOMS & CO. (LD.).

**H.C.**—M. J. HUGGINS.

CLASS 217.—*Cask of Cider, made in 1929.* [23 entries.]

**I. (£5.)**—H. W. DAVIS.

**II. (£3.)**—F. H. REA.

**III. (£2.)**—A. BASTON.

**R.**—W. J. WALDEN.

**V.H.C.**—E. HILL & SONS.

**H.C.**—SEVERN VALE CIDER CO. (LD.).

**C.**—R. BRUFORD.—DARTINGTON HALL (LD.).

CLASS 218.—*6 Quart Bottles of Cider, made in 1929.* [32 entries.]

**I. (£5.)**—PULLIN BROS.

**II. (£3.)**—DARTINGTON HALL (LD.).

**III. (£2.)**—K. C. HELYAR.

**R.**—W. J. WALDEN.

**V.H.C.**—SEVERN VALE CIDER CO. (LD.).

**H.C.**—W. J. BERRY.

**C.**—H. W. DAVIS.

CLASS 219.—*6 Quart Bottles of Cider, made in any year previous to 1929.* [9 entries.]

**I. (£5.)**—WICKWAR CIDER CO. (LD.).

**II. (£3.)**—SEVERN VALE CIDER CO. (LD.).

**III. (£2.)**—C. J. COOK

**R.**—PULLIN BROS.

**H.C.**—IXWORTH CYDER CO (LD.).

# **CHEESE.**

(These Classes were not open to Professional Teachers).

CLASS 220.—*Three Cheddar Cheeses (not less than 56lbs. each) made in 1929.* [7 entries.]

**I. (£15.)**—F. PORTCH.

**II. (£10.)**—S. T. WHITE.

**III. (£5.)**—S. R. DYKE.

**R.**—H. J. SALMON.

CLASS 221.—*Three Cheddar Cheeses (not over 56lbs. each), made in 1929.* [10 entries.]

**I. (£10.)**—S. T. WHITE.

**II. (£7.)**—W. H. COLLINS.

**III. (£4.)**—F. PORTCH.

**R.**—B. H. J. W. WHITE.

**H.C.**—C. M. HALLETT.

**C.**—H. H. PICKFORD.

CLASS 222.—*Four Loaf or other Truckle Cheddar Cheeses, made in 1929.* [9 entries.]

**I. (£5.)**—S. T. WHITE.

**II. (£3.)**—F. PORTCH.

**III. (£2.)**—H. H. PICKFORD.

**R.**—G. R. COLE.

**H.C.**—H. J. SALMON.

**C.**—B. H. J. W. WHITE.

CLASS 223.—*Three Caerphilly Cheeses, made in 1930.* [9 entries.]

**I. (£5.)**—W. SPRATT.

**II. (£3.)**—T. WILKINS.

**III. (£2.)**—T. J. COLLINGS.

**R.**—J. L. DAY.

**H.C.**—CHEDDAR VALLEY DAIRY CO. (LD.).

## **SPECIAL PRIZES.**

OFFERED BY THE DEVON COUNTY COUNCIL.

*For the best Exhibits in Class 223 made by residents in Devon.—*

*First prize, £1 10s.—second, £1—third, 10s.—fourth, 5s.*

*[1 entry.]*

[No Award.]

GIVEN BY THE DEVON COUNTY COUNCIL.

CLASS 224.—*Smallholder Cheese, not less than 4lbs. and not exceeding 8lbs. in weight, made in 1930 from new milk by a resident in Devon.* [5 entries.]

**I. (£1 10s.)**—Miss W. M. SWEETLAND.

**II. (£1.)**—Mrs. T. J. COGAN.

**R.**—Miss D. M. MARTIN.

## CREAM CHEESE, BUTTER AND CREAM.

(These Classes were not open to Professional Teachers).

CLASS 225. - *Three Cream or other Soft Cheeses.* [8 entries.]

- I. (£3.)—Miss R. ALNER.
- II. (£2.)—Miss B. WILLIAMS.
- III. (£1.)—Miss A. U. PRATT.
- IV.—Miss T. SIMMONDS.
- R.—Miss H. E. MITCHELL.

CLASS 226. - *2lbs. of Fresh (or very slightly salted) Butter.* [29 entries.]

- Eq. I. (£3 10s.)—Mrs. G. BLACKLER.
- Eq. I. (£3 10s.)—Mrs. B. DENNIS.
- III. (£2.)—Mrs. HILL.
- IV. (£1.)—J. NORTHCOTT.
- R.—Mrs. C. E. FAULL.
- V.H.C.—ALFRED BROWN (LD.).—Miss D. CANE. Mrs. W. H. HUTCHINGS.—Miss F. M. PRISK.—Mrs. I. ROWSE.
- H.C.—Mrs. S. HARDING.—Mrs. H. PILE.

CLASS 227. - *2lbs. of Butter, in the making of which no salt had been used, judged on the last day of the Show.* [21 entries.]

- I. (£4.)—Mrs. G. BLACKLER.
- II. (£3.)—J. NORTHCOTT.
- III. (£2.)—Mrs. B. DENNIS.
- IV. (£1.)—Mrs. A. REYNOLDS.
- R.—Mrs. W. H. HUTCHINGS.
- V.H.C.—Miss R. ALNER.—H. PILE.—Miss F. M. PRISK.

CLASS 228. - *12lbs. of Keeping Butter, in a jar or crock, delivered to the Secretary 4 weeks before the Show.* [9 entries.]

- I. (£5.)—Mrs. G. BLACKLER.
- II. (£4.)—Mrs. M. HEYWOOD.
- III. (£3.)—Mrs. O. REYNOLDS.
- IV.—Mrs. W. H. HUTCHINGS.
- R.—J. NORTHCOTT.



**lxxx** *Prizes awarded for Cream Cheese, Butter and Cream.*

**CLASS 229.**—*Four half-pounds of Scalded Cream.* [18 entries.]

**I. (£3.)**—MRS. J. H. SPEAR.

**II. (£2.)**—W. WHITE & SON.

**III. (£1.)**—J. NORTHCOTT.

**R.**—J. P. PRISK.

**V.H.C.**—MRS. S. BANBURY.—MRS. W. BEER.—MRS. DUNNING HOOPER.—  
MRS. L. B. VENNING.—MRS. F. VICARY.

**GIVEN BY THE DEVON COUNTY COUNCIL.**

**CLASS 230.**—*2lbs. of Butter made and exhibited by a Devon County Dairy School Student who had not previously won a 1st prize for Butter at the Devon County Show, made in 1lb. blocks with pattern as taught in the County Dairy School.* [12 entries.]

**I. (£1 10s.)** MRS. B. DENNIS.

**II. (£1 2s. 6d.)**—MISS P. E. TARR.

**III. (17s. 6d.)**—MRS. S. VANSTONE.

**IV. (10s.)**—MISS G. M. DART.

**CLASS 231.**—*2lbs. of Butter in 1lb. plain blocks (corrugations allowed) made by a resident in Devon.* [16 entries.]

**I. (£1 10s.)**—MRS. G. BLACKLER.

**II. (£1 2s. 6d.)**—MRS. B. DENNIS.

**III. (17s. 6d.)**—MISS P. E. TARR.

**IV. (10s.)**—MRS. A. REYNOLDS.

**V. (5s.)**—MRS. A. MOGFORD.

**V.H.C.**—MRS. H. PILE.

**CLASS 232.**—*2lbs. of Keeping Butter in 1lb. plain blocks, delivered to the Secretary before 3 p.m. on Wednesday, May 14, 1930. Suitability of packing was taken into consideration.* [16 entries.]

**I. (£1 10s.)**—MRS. G. BLACKLER.

**II. (£1 2s. 6d.)**—H. PILE.

**III. (17s. 6d.)**—MRS. C. E. FAULL.

**IV. (10s.)**—MRS. B. DENNIS.

**V.H.C.**—MRS. A. REYNOLDS.—MISS W. M. REYNOLDS.—MISS P. E. TARR.—  
MISS H. T. VANSTONE.

**H.C.**—MRS. W. HATHERLEY.

CLASS 233.—1lb. of Clotted Cream. Open only to Devon County Dairy School Students who had not previously won a 1st prize for Clotted Cream at the Devon County Show. [9 entries.]

- I. (£1 10s.)—MRS. E. B. BEER.
- II. (£1 2s. 6d.)—MISS J. S. COLES.
- III. (17s. 6d.)—MISS A. PARKER.
- IV. (10s.)—MISS P. E. TARR.
- R.—MISS D. CANE.

CLASS 234.—2lbs. of Clotted Cream. Open only to residents in Devon. [12 entries.]

- I. (£1 10s.)—MRS. R. J. WRIGHT.
- II. (£1 2s. 6d.)—MISS T. SIMMONS.
- III. (17s. 6d.)—MISS A. PARKER.
- IV. (10s.)—MRS. S. BANBURY.
- R.—MISS JERVOISE-SMITH.
- V.H.C.—MRS. CLEVERDON. MRS. H. PILE.

CLASS 235.—Collection of Farm Produce from a Holding in Devon not exceeding 50 acres, including 1lb. Butter, 1lb. Clotted Cream, and 1 dozen Eggs. (*The exhibits in this Class must have been sent by post.*) [4 entries.]

- I. (£2.)—MRS. W. R. BEER.
- II. (£1.)—MRS. W. H. HUTCHINGS.
- III. (10s.)—MISS E. M. TRICKEY.

#### SPECIAL PRIZE.

GIVEN BY A. T. LORAM, ESQ.

*For the Exhibitor or Competitor resident in Devon gaining most points in Classes 225 to 235 and the Egg Classes, reckoned as follows:—1st prize, 5 points; 2nd, 4 points; 3rd, 3 points; 4th, 2 points; 5th, 1 point.—£1 1s.*

- I.—MRS. G. BLACKLER, 25 points.

## COMPETITIONS.

### BUTTER-MAKING.

(No Winner of a First Prize given by this Society for Butter-making during the last three years was eligible to compete in Classes 236 to 238).

The Prizes in Classes 236 and 237 were given by the Devon County Council.

**CLASS 236.**—*For Devon County Dairy School Students who had not previously won a prize for Butter-making at any Show. On the 1st day of the Show. [34 entries.]*

#### 1ST SECTION.

**I. (£2.)**—A. HUTCHINGS.

**II. (£1 10s.)**—T. GOSS.

**III. (£1.)**—Miss F. LASCELLES.

**IV. (10s.)**—J. BURGESS.

**V. (5s.)**—Miss B. CANE.

**R.**—Miss M. E. DAVIES.

**H.C.**—Miss C. COLE.—Miss A. DENNIS.

**C.**—Miss N. BALE. Miss R. CHAFFE.—Miss M. DENNIS.

#### 2ND SECTION.

**I. (£2.)**—S. N. PARKIN.

**II. (£1 10s.)**—Miss I. PARKER.

**III. (£1.)**—Miss A. THOMAS.

**IV. (10s.)**—Miss N. PALK.

**V. (5s.)**—Miss G. SCOTT.

**R.**—Miss J. CHUDLEY.

**H.C.**—Miss A. PARKER.—Miss W. M. REYNOLDS.

**C.**—Miss E. MARTIN.—Miss W. NORTHMOOR.—Miss O. PALK.

**CLASS 237.**—*District Competition for Teams of 4 or 5 Devon County Dairy School Students chosen to represent North, South, East and West Devon. A Shield, to the value of £15, to the winning Team, to be held for one year, with Bronze Medals to each member. On the 2nd day of the Show.*

**I. (South Devon).**—Miss B. CANE, Miss A. DENNIS, S. N. PARKIN, Miss M. VANSTONE, Mrs. YABSLEY.

**R. (West Devon).**—Miss E. ANSTEY, Miss M. BARRIBALL, Miss M. E. DAVIES, T. GOSS, Miss W. WARD.

CLASS 238.—*For Students who had been through a course of instruction in Butter-making at any County Council School, and who had not previously won a first or second prize for Butter-making at the London Dairy, Royal or Bath and West Shows. On the 2nd day of the Show. [20 entries.]*

I. (£4.)—Miss S. M. STEPHENS.

II. (£3.)—Miss E. M. AYRE.

III. (£1 10s.)—Miss M. E. EUSTICE.

IV. (£1.)—Miss J. B. WORTH.

H.C.—Miss E. I. BRUSH.—Miss E. E. PETERS.

C.—Miss A. U. PRATT.—Miss A. THOMAS.

CLASS 239.—*For Men and Women. On the 3rd day of the Show. [20 entries.]*

I. (£4.)—Miss R. HANCOCK.

II. (£3.)—Miss H. E. MITCHELL.

III. (£1 10s.)—Miss J. B. WORTH.

IV. (£1.)—Miss E. M. AYRE.

R.—Miss S. M. STEPHENS.

V.H.C.—Miss A. U. PRATT.

H.C.—Miss K. DAVIS.

C.—Miss D. BEEDLE.—Miss M. E. EUSTICE.—Miss E. E. PETERS.

CLASS 240.—*For Winners of First and Second Prizes in the Butter-making Classes 236 to 239, or at any previous meeting of the Society. On the 4th day of the Show. [16 entries.]*

I. (Gold Medal).—S. N. PARKIN.

II. (Silver Medal).—Miss H. E. MITCHELL.

III. (Bronze Medal).—Miss K. DAVIS.

R.—Miss E. M. AYRE.

#### DEVON CHAMPIONSHIP PRIZES.

*For the best Competitors in Class 240 who had previously won a first or second prize at the Devon County Show, but had not won the Devon County Silver Medal.*

1st Prize, Silver Medal, given by the British Dairy Farmers' Association.

2nd Prize, Bronze Medal, given by the Devon County Council.

I.—Miss E. M. AYRE.

II.—Mrs. A. MOGFORD.

R.—Miss M. S. VOYSEY.

**JUNKET-MAKING.**

(The Prizes in Classes 241 and 242 were given by the Devon County Council).

**CLASS 241.** *The Best Junket made from 1 quart of milk by Devon County Dairy School Students who had not previously won a first prize at the Devon County Show. On the 3rd day of the Show. [24 entries.]*

**1ST SECTION.**

**I. (£1 10s.)**—Miss D. BEEDELL.

**II. (£1 2s. 6d.)**—Miss E. HOLLOWAY.

**III. (17s. 6d.)**—Miss M. R. BARRIBALL.

**IV. (10s.)**—Miss E. M. AYRE.

**R.**—Miss D. LUXTON.

**V.H.C.**—Miss N. PALK.

**2ND SECTION.**

**Equal I. (£1 6s. 3d.)**—Miss A. U. PRATT and Miss M. S. VOYSEY.

**III. (17s. 6d.)**—Miss G. SCOTT.

**IV (10s.)**—Miss A. THOMAS.

**R.**—Miss W. M. SWEETLAND.

**V.H.C.**—Miss A. TRIGGS.—Miss W. WARD.

**CLASS 242.**—*Devon Junket Championship. Open only to first and second prize-winners at Devon County Shows. The best Junket made from 1 quart of Milk. On the 3rd day of the Show. [8 entries.]*

**I. (£1 1s.)**—Miss A. PRATT.

**II.**—Miss D. BEEDELL.

**R.**—Miss MATTINSON.

**V.H.C.**—Mrs. E. B. BEER.—Miss HOLLOWAY.—Miss M. VOYSEY.

**H.C.**—Miss P. E. TARR.

## SHOEING.

Special Novice Prizes of £3, £2, and £1 were given in Classes 243 and 244 to men who had never previously won a prize of the value of £2 and over

**CLASS 243.**—*For Agricultural Horse Shoeing by Smiths. On the 2nd day of the Show.* [25 entries.]

- I. (£4.)** —A. THOMAS, A.F.C.L.
- II. (£3.)**—J. VANSTONE, A.F.C.L.
- III. (£2.)** —L. BASTIN, A.F.C.L.
- IV. (£1.)**—T. E. MASTERS.
- R.** H. F. GLIDDON, R.S.S.
- I. Novice (£3.)** J. DAVIES.
- II. Novice (£2.)** H. L. WELLAND.
- III. Novice (£1.)** G. H. FOOT, R.S.S.

### SPECIAL PRIZES.

GIVEN BY THE DEVON BRANCHES OF THE NATIONAL MASTER  
FARRIERS' ASSOCIATION.

*For the best Competitors in Class 243 who were members of any Devon Branch of the above Association whose Subscriptions had been paid up to March 25, 1930, or employees of such members.*

- I. (£4.)**—J. VANSTONE, A.F.C.L.
- II. (£3.)** —H. F. GLIDDON, R.S.S.
- III. £2.)** F. G. H. SNELL.
- IV. (£1.)** R. SUSSEX.
- R.** —S. E. HOLLOWAY, R.S.S.

**CLASS 244.** *For Hunter Shoeing by Smiths. On the 3rd day of the Show.* [14 entries.]

- I. (£4.)** M. J. CLARK.
- II. (£3.)** A. THOMAS, A.F.C.L.
- III. (£2.)** —L. BASTIN, A.F.C.L.
- IV. (£1) & I. Novice (£3.)** —J. DAVIES.
- R.** J. VANSTONE, A.F.C.L.
- II. Novice (£2.)** H. L. WELLAND.

### SPECIAL PRIZES.

GIVEN BY THE DEVON COUNTY COUNCIL.

*For the best Competitors in Class 244 who had passed through the Devon County Council Farriery School and who held the R.S.S. Certificate.*

- I. (£4.)** L. BASTIN, A.F.C.L.
- II. (£3.)**—J. VANSTONE, A.F.C.L.
- III. (£2.)**—C. SMITH, A.F.C.L.
- IV. (£1.)**—S. E. HOLLOWAY.

CLASS 245. — *For Shoemaking or Turning by Smiths. On the 4th day of the Show. [15 entries.]*

**I. (£4.)**—J. H. BAKER, A.F.C.L.

**II. (£3.)**—H. F. GLIDDON, R.S.S.

**III. (£2.)**—S. E. HOLLOWAY, R.S.S.

**IV. (£1.)**—M. J. CLARK.

**R.**—A. THOMAS, A.F.C.L.

#### PRIZES GIVEN BY THE DEVON COUNTY COUNCIL.

CLASS 246. — *For making 1 stamped and 1 fullered shoe by competitors under 21 years of age who had passed through the Devon County Council Farriery School. [5 entries.]*

**I. (£4.)**—R. SUSSEX.

**II. (£3.)**—H. VANSTONE.

**III. (£2.)**—W. T. MAY.

**IV. (£1.)**—A. FORWARD.

**R.**—J. SMITH.

#### SPECIAL PRIZE.

“Cooke’s Cup for Horse Shoeing,” given by William Cooke and Co. (Ltd.), to the Competitor who had passed through the Devon County Council Farriery School and held the R.S.S. Certificate winning most points in Class 244. The Cup to be won 3 years in succession before becoming the absolute property of the winner.

**I.**—L. BASTIN.

#### CHAMPION PRIZES.

“The Capewell Challenge Cup,” given by the Capewell Horse Nail Co. (Ltd.) for the best Competitor in Class 243. The Cup to be won 3 years in succession or 4 times in all before becoming the absolute property of the winner.

**I.**—A. THOMAS.

Gold Watch, given by Messrs. William Martin, Sons and Co., “Dundyan” Iron and Steel Works, Coatbridge, (per Godwin, Warren and Co. (Ltd.), Bristol), for the Best Competitor in Class 244.

**I.**—M. J. CLARK.

An All-Steel “Godwin” Shoe Turning Hammer, by Messrs. Godwin, Warren and Co., for the Best Competitor in Class 245.

**I.**—J. H. BAKER.

## **SHEEP SHEARING.**

(Prizes given by the Devon County Council).

CLASS 247.—*Best Shearing of 2 Sheep by Agricultural Labourers.  
On the 4th day of the Show.* [7 entries.]

**I. (£2.)**—P. HUTCHINGS.

**Equal II. (15s.)**—A. J. HEATH.

**Equal II. (15s.)**—E. REEVES.

**IV. (5s.)**—F. CADDY.

CLASS 248.—*Best Shearing of 2 Sheep by Farmers and Farmers'  
Sons. On the 4th day of the Show.* [12 entries.]

**I. (£2.)**—W. FORD.

**II. (£1.)**—J. TOZER.

**III. (10s.)**—G. HILL.

**IV. (5s.)**—J. CHUDLEY.

CLASS 249.—*Best Shearing of 2 Sheep by Students 21 years of age  
and over who have attended the Devon County Council Manual  
Process Classes. On the 3rd day of the Show.* [19 entries.]

**I. (£2.)**—P. HUTCHINGS.

**II. (£1.)**—A. H. WOOD.

**III. (10s.)**—P. O. HUTCHINGS.

**IV. (5s.)**—R. P. BEAL.

CLASS 250.—*Best Shearing of 2 Sheep by Students under 21 who had  
attended the Devon County Council Manual Process Classes.  
On the 3rd day of the Show.* [9 entries.]

**I. (£2.)**—G. H. TRIPP.

**II. (£1.)**—S. HARVEY.

**III. (10s.)**—G. CROCKER.

**IV. (5s.)**—G. H. BEAL.

## **ROPE AND SPAR MAKING.**

(Prizes given by the Devon County Council).

CLASS 251.—*For most and best Spars made in 30 minutes and longest  
and best Rope made in 5 minutes by a resident in Devon under 21  
years of age. On the 4th day of the Show.* [5 entries.]

**I. (£2.)**—A. J. MORRISH.

**II. (£1.)**—F. WEBBER.

**III. (10s.)**—H. CLARKE.

CLASS 252.—*For most and best Spars made in 30 minutes and longest  
and best Rope made in 5 minutes by a resident in Devon 21  
years of age and over. On the 4th day of the Show.* [11 entries.]

**I. (£2.)**—G. HINGSTON.

**II. (£1.)**—L. WAYCOTT.

**III. (10s.)**—G. LAMBLE.



lxxxviii     *Prizes awarded for Live Stock Judging, Poultry  
Trussing and Lobster Pot Making.*

## LIVE STOCK JUDGING.

(Prizes given by the Devon County Council).

CLASS 253. — *For Judging Cattle on points by Students under 21 years of age who had attended the Devon County Manual Process Classes. On the 2nd day of the Show.* [20 entries.]

**Equal I. (£1 10s.)**—M. FORD and W. G. A. HUNKIN.

**Equal III. (5s.)**—C. E. MUDGE and J. W. MUDGE.

CLASS 254. — *For Judging Cattle on points by Students 21 years of age and over, who had attended the Devon County Manual Process Classes. On the 2nd day of the Show.* [24 entries.]

**I. (£2.)**—A. W. BURNELL.

**II. (£1.)**—R. P. DINNIS.

**III. (10s.)**—W. M. GUBBIN.

## POULTRY TRUSSING.

(Prizes given by the Devon County Council).

CLASS 255. — *Trussing one fowl for roasting, by residents in Devon who had attended the Devon County Council Travelling Poultry School or Poultry Trussing Class. On the 3rd day of the Show.* [3 entries.]

**I. (£2.)**—Miss E. M. AYRE.

**Equal II. (£1 5s.)**—E. M. HILL and Miss E. M. MARSHALL.

## LOBSTER POT MAKING.

CLASS 256. — *Best made 5-Ringed Lobster Pot, with Funnell or Kell 7 inches wide at bottom, by competitors 18 years of age and over. On the 2nd day of the Show.* [4 entries.]

**I. (£3.)**—J. WESTLAKE.

**II. (£2.)**—W. WARE.

**III. (£1.)**—M. BROWSE.

**R.**—W. PENGELLY.

CLASS 257.— *Best made 5-Ringed Lobster Pot, with Funnell or Kell 7 inches wide at bottom, by competitors under 18 years of age—First prize, £3—second, £2—third, £1.*

[NO ENTRY.]

## POULTRY.

(UNDER POULTRY CLUB RULES).

(The Birds in Classes 1 to 45 and 56 to 67 must have been hatched previous to January 1st, 1930).

CLASS 1.—ANY DISTINCT BREED, COCK AND 2 HENS, THE PROPERTY OF ONE EXHIBITOR. [9 entries.]

**I. (£3.)**—EXECUTORS OF THE LATE LORD DEWAR, *White Wyandottes*.

**II. (£2.)**—J. H. BAKER & SONS, *Indian Game*.

**III. (£1.)**—S. OATEY, *Dorkings*.

**R.**—K. J. G. HAWKEY, *Australorps*.

**V.H.C.**—MRS. E. BURCOMBE, *Partridge Rocks*.

**H.C.**—MISS D. EARLE, *Werksummers*.

CLASS 2.—PLYMOUTH ROCK (BARRED), COCK. [7 entries.]

**I. (£1 10s.)**—MRS. NORMAN GRANT.

**II. (£1.)**—S. LAKE.

**III. (10s.)**—W. COURT.

**R.**—MRS. W. G. JACKA.

**V.H.C.**—F. W. ROGERS.

**H.C.**—W. E. DENNIS.

**C.**—PENPRASE BROS.

CLASS 3.—PLYMOUTH ROCK (BARRED), HEN. [5 entries].

**I. (£1 10s.)**—MRS. W. G. JACKA.

**II. (£1.)**—W. COURT.

**R.**—MRS. NORMAN GRANT.

**V.H.C.**—PENPRASE BROS.

**C.**—F. W. ROGERS.

CLASS 4.—PLYMOUTH ROCK (ANY OTHER VARIETY), COCK.  
[8 entries.]

**I. (£1 10s.)**—W. R. ABBEY.

**II. (£1.)**—H. O. CLARKE.

**III. (10s.)**—J. R. REDDECLIFFE.

**R.**—MRS. W. A. REEVES.

**V.H.C.**—H. J. SCREECH.

**H.C.**—W. H. BREWER.

**C.**—W. E. DENNIS.

**CLASS 5.—PLYMOUTH ROCK (ANY OTHER VARIETY), HEN.**  
[5 entries.]

**I. (£1 10s.)**—MRS. W. G. JACKA.

**II. (£1.)**—J. H. NORMAN.

**R.**—W. R. ABBEY.

**V.H.C.**—MRS. E. BURCOMBE.

**H.C.**—A. ARTHUR.

**CLASS 6. ORPINGTON (ANY VARIETY), COCK.** [11 entries.]

**I. (£1 10s.)**—EXECUTORS OF THE LATE LORD DEWAR.

**II. (£1.)**—W. J. GOLDING.

**III. (10s.)**—G. THOMAS.

**R.**—W. H. COOK.

**V.H.C.**—W. BALMENT.

**H.C.**—R. CARPENTER.

**C.**—G. ROGERS.

**CLASS 7.—ORPINGTON (ANY VARIETY), HEN.** [7 entries.]

**I. (£1 10s.)**—J. H. BAKER & SON.

**II. (£1.)**—EXECUTORS OF THE LATE LORD DEWAR.

**III. (10s.)**—G. THOMAS.

**R.**—W. H. COOK.

**V.H.C.**—W. BALMENT.

**H.C.**—H. NICHOLLS.

**CLASS 8.—BARNVELDER, COCK.** [9 entries.]

**I. (£1 10s.)**—EXECUTORS OF THE LATE LORD DEWAR.

**II. (£1.)**—W. A. SLOCOCK.

**III. (10s.)**—N. M. GRANT.

**R.**—W. HAMBLY.

**V.H.C.**—MISS A. C. H. CREWE.

**H.C.**—MRS. THORNE.

**C.**—J. S. HUGGINS.

**CLASS 9.—BARNVELDER, HEN.** [13 entries.]

**I. (£1 10s.)**—EXECUTORS OF THE LATE LORD DEWAR.

**II. (£1.)**—J. S. HUGGINS.

**III. (10s.)**—W. H. COOK.

**R.**—P. W. DOWN.

**V.H.C.**—J. S. HUGGINS.

**H.C.**—W. H. TURNER.

**C.**—W. A. SLOCOCK.

CLASS 10.—RHODE ISLAND RED, COCK. [12 entries.]

- I. (£1 10s.)** W. R. ABBEY.
- II. (£1.)** G. H. MUZZLEWHITE.
- III. (10s.)** Capt. A. T. HINGSTON.
- R.**—J. H. NORMAN.
- V.H.C.**—S. J. TAPLEY.
- H.C.**—J. H. BAKER & SON.
- C.**—W. TALL.

CLASS 11. RHODE ISLAND RED, HEN. [10 entries.]

- I. (£1 10s.)**—W. R. ABBEY.
- II. (£1.)** G. H. MUZZLEWHITE.
- III. (10s.)** W. TALL.
- R.**—G. F. GRIFFITHS.
- V.H.C.** R. O. BUTTERWORTH.
- H.C.** EXECUTORS OF THE LATE LORD DEWAR.
- C.** J. H. BAKER & SON.

CLASS 12. SUSSEX (LIGHT), COCK. [8 entries.]

- I. (£1 10s.)** Sir GOMER BERRY, Bart.
- II. (£1.)** Sir GOMER BERRY, Bart.
- III. (10s.)** EXECUTORS OF THE LATE LORD DEWAR.
- R.**—J. H. BAKER & SON.
- V.H.C.** Col. D. A. CHAYTOR.
- H.C.** Mrs. M. A. GRANT.
- C.** ABBOT BROS.

CLASS 13. —SUSSEX (LIGHT), HEN. [8 entries.]

- I. (£1 10s.)**—Sir GOMER BERRY, Bart.
- II. (£1.)**—Sir GOMER BERRY, Bart.
- III. (10s.)** EXECUTORS OF THE LATE LORD DEWAR.
- R.**—Col. D. A. CHAYTOR.
- V.H.C.** J. H. BAKER & SON.
- H.C.** H. UNDERWOOD.
- C.**—Mrs. M. A. GRANT.

CLASS 14. —SUSSEX (SPECKLED), COCK. [6 entries.]

- I. (£1 10s.)**—Sir GOMER BERRY, Bart.
- II. (£1.)**—E. J. CORNISH & SON.
- III. (10s.)**—A. W. H. LOVELESS.
- R.**—Mrs. M. A. GRANT.
- V.H.C.**—A. W. H. LOVELESS.
- C.**—W. M. DAVIES.

**CLASS 15.—SUSSEX (SPECKLED), HEN. [12 entries.]****I. (£1 10s.)** —Sir GOMER BERRY, Bart.**II. (£1.)**—EXECUTORS OF THE LATE LORD DEWAR.**III. (10s.)**—E. J. GIBBS.**R.**—Mrs. M. A. GRANT.**V.H.C.** A. W. H. LOVELESS.**H.C.** —J. H. NORMAN.**C.** E. J. CORNISH & SON.**CLASS 16. SUSSEX (ANY OTHER VARIETY), COCK. [5 entries.]****I. (£1 10s.)** J. DUMBLETON.**II. (£1.)** Sir GOMER BERRY, Bart.**R.** Mrs. M. A. GRANT.**V.H.C.** EXECUTORS OF THE LATE LORD DEWAR**CLASS 17. —SUSSEX (ANY OTHER VARIETY), HEN. [6 entries.]****I. (£1 10s.)** Sir GOMER BERRY, Bart.**II. (£1.)** EXECUTORS OF THE LATE LORD DEWAR**R.** J. DUMBLETON.**CLASS 18. —DORKING (ANY VARIETY), COCK. [4 entries.]****I. (£1 10s.)** —EXECUTORS OF THE LATE LORD DEWAR.**II. (£1.)** A. J. MAJOR.**R.** —A. J. MAJOR**V.H.C.** —S. OATEY**CLASS 19. DORKING (ANY VARIETY), HEN. [6 entries.]****I. (£1 10s.)**—A. J. MAJOR.**II. (£1.)**—EXECUTORS OF THE LATE LORD DEWAR.**III. (10s.)** A. J. MAJOR.**R.** Mrs. E. MILLS.**V.H.C.**—S. OATEY.**H.C.**—W. R. OATEY.**CLASS 20.—LANGSHAN, COCK OR HEN. [4 entries.]****I. (£1 10s.)**—Mrs. E. MILLS.**II. (£1.)**—Mrs. E. MILLS.**R.**—EXECUTORS OF THE LATE LORD DEWAR.**V.H.C.**—E. EMERY.**CLASS 21.—WYANDOTTE (WHITE), COCK. [5 entries.]****I. (£1 10s.)**—EXECUTORS OF THE LATE LORD DEWAR.**II. (£1.)**—C. N. GOODE.**R.**—E. A. JONAS.**V.H.C.**—W. J. RIDGE.

**CLASS 22.—WYANDOTTE (WHITE), HEN. (5 entries.)**

**I. (£1 10s.)**—EXECUTORS OF THE LATE LORD DEWAR.

**II. (£1.)**—T. ROSKILLY.

**R.** —C. N. GOODE.

**V.H.C.**—E. A. JONAS.

**H.C.** E. A. JONAS.

**CLASS 23.—WYANDOTTE (COLUMBIAN), COCK. [5 entries.]**

**I. (£1 10s.)** W. HARRIS.

**II. (£1.)** R. MATTERFACE.

**R.** —F. BROWN.

**V.H.C.** J. DICKINSON & SON.

**CLASS 24. WYANDOTTE (COLUMBIAN), HEN. [4 entries.]**

**I. (£1 10s.)**—F. BROWN.

**II. (£1.)** R. MATTERFACE.

**R.** J. DICKINSON & SON.

**V.H.C.** W. HARRIS.

**CLASS 25. WYANDOTTE (ANY OTHER VARIETY), COCK OR HEN.  
[7 entries.]**

**I. (£1 10s.)** EXECUTORS OF THE LATE LORD DEWAR.

**II. (£1.)** J. H. BAKER & SON.

**III. (10s.)** E. A. JONAS.

**R.** —MRS. THORNE.

**V.H.C.** J. D. HOW.

**H.C.** W. SNELL.

**CLASS 26. INDIAN GAME, COCK. [13 entries.]**

**I. (£1 10s.)** —J. H. BAKER & SON.

**II. (£1.)**—W. J. CHAPMAN.

**III. (10s.)**—C. BRENT.

**R.** N. HARRIS.

**V.H.C.** C. P. PROWSE.

**H.C.** —W. TALL.

**CLASS 27.—INDIAN GAME, HEN. [9 entries.]**

**I. (£1 10s.)**—J. H. BAKER & SON.

**II. (£1.)**—E. PURCELL.

**III. (10s.)**—N. HARRIS.

**R.**—C. BRENT.

**V.H.C.**—K. J. G. HAWKEY.

**H.C.**—L. BEVAN.

**CLASS 28.—FRENCH (INCLUDING FAVEROLLES), COCK. [4 entries.]****I. (£1 10s.)**—G. HENWOOD.**II. (£1.)**—MRS. W. A. REEVES.**R.**—G. HENWOOD.**CLASS 29.—FRENCH (INCLUDING FAVEROLLES), HEN. [4 entries.]****I. (£1 10s.)**—F. W. GOODWIN. .**II. (£1.)**—G. HENWOOD.**R.**—G. HENWOOD.**H.C.**—MRS. W. A. REEVES.**CLASS 30.—MINORCA, COCK. [9 entries.]****I. (£1 10s.)**—EXECUTORS OF THE LATE LORD DEWAR.**II. (£1.)**—MRS. R. HAKE.**III. (10s.)**—W. A. GODFREE.**R.**—D. W. JEFFERY.**V.H.C.**—H. HILL.**H.C.**—H. HILL.**CLASS 31.—MINORCA, HEN. [19 entries.]****I. (£1 10s.)**—MRS. R. HAKE.**II. (£1.)**—EXECUTORS OF THE LATE LORD DEWAR.**III. (10s.)**—W. A. GODFREE.**R.**—GOODMAN BROS.**V.H.C.**—W. S. DANDO.**H.C.**—F. C. TOZER.**CLASS 32.—LEGHORN (WHITE), COCK. [3 entries.]****I. (£1 10s.)**—F. J. PHILLIPS.**II. (£1.)**—W. SIBLEY.**CLASS 33.—LEGHORN (WHITE), HEN. [5 entries.]****I. (£1 10s.)**—F. J. PHILLIPS.**II. (£1.)**—J. H. NORMAN.**R.**—J. H. NORMAN.**V.H.C.**—J. H. NORMAN.**H.C.**—W. SIBLEY.**CLASS 34.—LEGHORN (ANY OTHER COLOUR), COCK. [9 entries.]****I. (£1 10s.)**—EXECUTORS OF THE LATE LORD DEWAR.**II. (£1.)**—E. LL. SIMON.**III. (10s.)**—J. HEARN.**R.**—W. H. BREWER.**V.H.C.**—W. E. GILLING.

**CLASS 35.—LEGHORN (ANY OTHER COLOUR), HEN. [2 entries.]**

- I. (£1 10s.)—EXECUTORS OF THE LATE LORD DEWAR.**  
**R.—W. E. GILLING.**

**CLASS 36.—HAMBURG (ANY VARIETY), COCK OR HEN. [9 entries.]**

- I. (£1 10s.)—EXECUTORS OF THE LATE LORD DEWAR.**  
**II. (£1.)—W. SNELL.**  
**III. (10s.)—Sergt. A. CLIFTON.**  
**R.—W. H. AVERY.**  
**V.H.C.—W. SNELL.**  
**H.C.—W. H. AVERY.**

**CLASS 37.—CAMPINE, COCK OR HEN. [6 entries.]**

- I. (£1 10s.)—W. A. SLOCOCK.**  
**II. (£1.)—W. A. SLOCOCK.**  
**III. (10s.)—J. S. APPLETON.**  
**R.—J. S. APPLETON.**  
**V.H.C.—J. W. KINSEY.**  
**H.C.—Dr. T. ST. CLAIR SMITH.**

**CLASS 38.—OLD ENGLISH GAME (BLACK RED), COCK. [10 entries.]**

- I. (£1 10s.)—R. D. BLIGHT.**  
**II. (£1.)—EXECUTORS OF THE LATE LORD DEWAR.**  
**III. (10s.)—J. H. BAKER & SON.**  
**R.—A. HEARN.**  
**V.H.C.—E. BROWN.**  
**H.C.—HEARN BROS.**

**CLASS 39.—OLD ENGLISH GAME (WHEATON OR PARTRIDGE),  
HEN. [7 entries.]**

- I. (£1 10s.)—J. H. BAKER & SON.**  
**II. (£1.)—R. D. BLIGHT.**  
**III. (10s.)—J. JONES.**  
**R.—HEARN BROS.**  
**V.H.C.—G. F. GRIFFITHS.**

**CLASS 40.—OLD ENGLISH GAME (ANY OTHER COLOUR), COCK.  
[7 entries.]**

- I. (£1 10s.)—R. D. BLIGHT.**  
**II. (£1.)—J. H. BAKER & SON.**  
**III. (10s.)—G. F. GRIFFITHS.**  
**R.—A. J. MAJOR.**  
**V.H.C.—Sir GOMER BERRY, Bart.**  
**H. C. LODGE & SAXTON.**



CLASS 41.—OLD ENGLISH GAME (ANY OTHER COLOUR), HEN.  
[5 entries.]

I. (£1 10s.)—R. D. BLIGHT.

II. (£1.)—J. JONES.

R.—A. HEARN.

H.C.—F. GRIFFITHS.

CLASS 42.—ANCONA, COCK. [10 entries.]

I. (£1 10s.)—T. DAVIES.

II. (£1.)—J. H. BAKER & SON.

III. (10s.)—W. R. DAVIES.

R.—J. JONES.

V.H.C.—S. WEEKES.

CLASS 43.—ANCONA, HEN. [12 entries.]

I. (£1 10s.)—T. DAVIES.

II. (£1.)—J. H. BAKER & SON.

III. (10s.)—T. DAVIES.

R.—T. HEAD.

V.H.C.—S. WEEKES.

H.C.—R. CARPENTER.

CLASS 44.—ANY OTHER DISTINCT BREED NOT PREVIOUSLY  
MENTIONED (EXCLUDING BANTAMS), COCK. [8 entries.]

I. (£1 10s.)—R. F. HEARNshaw, *Scots Grey*.

II. (£1.)—T. HAMMETT, *Malay*.

III. (10s.)—EXECUTORS OF THE LATE LORD DEWAR, *Cochin*.

R.—J. H. BAKER & SON, *Jubilee*.

V.H.C.—W. H. BREWER.

H.C.—W. G. BRENT, *Black Sumatra*.

C.—J. E. H. VENNING, *Australorp*.

CLASS 45.—ANY OTHER DISTINCT BREED NOT PREVIOUSLY  
MENTIONED (EXCLUDING BANTAMS), HEN. [10 entries.]

I. (£1 10s.)—A. E. COLLETT, *Old English Pheasant Fowl*.

II. (£1.)—ABBOT BROS.

III. (10s.)—J. H. BAKER & SON, *Aseel*.

R.—EXECUTORS OF THE LATE LORD DEWAR, *Cochin*.

V.H.C.—A. J. MAJOR, *Scots Dumpy*.

SPECIAL PRIZES.

The Columbian Wyandotte Club (Hon. Sec., J. Dickinson, Vale House, Loose, Maidstone), offered the following Special Prizes:—

“The Goddard Visiting Cup” for best Columbian Wyandotte exhibited.

I.—W. HARRIS.

*A Silver Spoon for best of opposite Sex to Cup Winner.*

**I.—F. BROWN.**

*"The Twist Novice Cup" and the "West Hill Novice Points Cup" (Points credited by Club Secretary).*

#### CHAMPION PRIZES.

*Best Cock or Cockerel exhibited in any of the Classes.*

**I. (£3.)—Sir GOMER BERRY, Bart.**

*Best Hen or Pullet exhibited in any of the Classes.*

**I. (£3.)—J. H. BAKER & SON.**

### SELLING CLASSES.

**CLASS 46.—ANY DISTINCT BREED, COCK OR COCKEREL (PRICE NOT TO EXCEED £1 ls.) [16 entries.]**

**I. (£1 10s.)—EXECUTORS OF THE LATE LORD DEWAR.**

**II. (£1.)—R. BUTLAND, jun., *Indian Game*.**

**III. (10s.)—W. LEWIS, *R. I. R.***

**R.—J. H. BAKER & SON, *Indian Game*.**

**V.H.C.—J. R. REDDECLIFFE.**

**H.C.—G. F. GRIFFITHS.**

**C.—C. N. GOODE.**

**CLASS 47.—ANY DISTINCT BREED, HEN OR PULLET (PRICE NOT TO EXCEED £1 ls.) [12 entries.]**

**I. (£1 10s.)—C. N. GOODE.**

**II. (£1.)—EXECUTORS OF THE LATE LORD DEWAR.**

**III. (10s.)—W. H. AVERY, *Hamburg*.**

**R.—MRS. E. MILLS, *Dorking*.**

**V.H.C.—J. NICHOLLS, *Rhode*.**

**H.C.—E. A. JONAS, *Partridge Wyandotte*.**

**C.—J. H. BAKER & SON, *Indian Game*.**

### CHICKENS OF 1930.

**CLASS 48.—SUSSEX (ANY VARIETY), COCKEREL. [9 entries.]**

**I. (£1 10s.)—Sir GOMER BERRY, Bart., hatched January 2nd.**

**II. (£1.)—Sir GOMER BERRY, Bart., hatched January 2nd.**

**III. (10s.)—A. W. MARSHALL, hatched January 15th.**

**R.—H. UNDERWOOD, hatched January 2nd.**

**V.H.C.—Capt. A. T. Hingston, hatched January 9th.**

**C.—J. E. ATHERTON, hatched January 1st.**

CLASS 49.—SUSSEX (ANY VARIETY), PULLET. [10 entries.]

I. (£1 10s.)—Sir GOMER BERRY, Bart., hatched January 2nd.

II. (£1.)—J. E. ATHERTON, hatched January 1st.

III. (10s.)—Miss M. V. LARKWORTHY.

R.—A. W. MARSHALL, hatched January 15th.

V.H.C. Capt. A. T. Hingston, hatched January 8th.

CLASS 50.—WYANDOTTE (ANY VARIETY), COCKEREL. [5 entries.]

I. (£1 10s.)—Sir GOMER BERRY, Bart., hatched January 2nd.

II. (£1.)—N. M. GRANT.

CLASS 51.—WYANDOTTE (ANY VARIETY), PULLET. [5 entries.]

I. (£1 10s.)—SPINKS & EVANS.

II. (£1.)—Rev. R. L. COLLINS, hatched January 26th.

R.—N. M. GRANT, hatched January 8th.

CLASS 52.—ANY OTHER VARIETY, SOFT FEATHER, COCKEREL—  
[9 entries.]

I (£1 10s.)—W. R. ABBEY, *R. I. R.*, hatched January 1st.

II. (£1.)—G. H. MUZZLEWHITE, *R. I. R.*, hatched January 1st.

III. (10s.)—H. T. HILLS, *R. I. R.*, hatched January 17th.

R.—W. TALL, *R. I. R.*, hatched January 2nd.

CLASS 53.—ANY OTHER VARIETY, SOFT FEATHER, PULLET.  
[12 entries.]

I. (£1 10s.)—EXECUTORS OF THE LATE LORD DEWAR, hatched January 1st.

II. (£1.)—Capt. A. T. HINGSTON, *R. I. R.*, hatched January 4th.

III. (10s.)—W. R. ABBEY, *R. I. R.*, hatched January 10th.

R.—A. J. MAJOR, *Dorking*, hatched January 2nd.

V.H.C.—PENPRASE BROS., hatched January 10th.

H.C.—Mrs. E. MILLS, *Dorking*, hatched January 16th.

CLASS 54. ANY OTHER VARIETY, HARD FEATHER, COCKEREL.  
[6 entries.]

I. (£1 10s.)—N. RYALL, *Indian Game*, hatched January 14th.

II. (£1.)—L. BEVAN, *Indian Game*, hatched January 12th.

CLASS 55.—ANY OTHER VARIETY, HARD FEATHER, PULLET.  
[4 entries.]

I. (£1 10s.)—J. H. BAKER, *Indian Game*, hatched January 3rd.

II. (£1.)—N. RYALL, *Indian Game*, hatched January 14th.

R.—L. BEVAN, *Indian Game*, hatched January 12th.

H.C.—W. G. BRENT, *Indian Game*.

## **UTILITY POULTRY.**

**CLASS 56.—WYANDOTTE, COCK. [12 entries.]**

- I. (£1 10s.)—EXECUTORS OF THE LATE LORD DEWAR.**
- II. (£1.)—Sir GOMER BERRY, Bart.**
- III. (10s.)—MAUNDER & SONS.**
- R.—C. N. GOODE.**
- V.H.C.—N. M. GRANT.**
- H.C.—J. D. BEAK.—TREBILCOCK BROS.**
- C.—TREBILCOCK BROS.**

**CLASS 57.—WYANDOTTE, HEN. [11 entries.]**

- I. (£1 10s.) EXECUTORS OF THE LATE LORD DEWAR.**
- II. (£1.) -J. D. BEAK.**
- III. (10s.)—COLLINGS BROS.**
- R.—C. N. GOODE.**
- V.H.C.—N. M. GRANT.**
- H.C.—MAUNDER & SONS.**
- C. T. ROSKILLY.**

**CLASS 58.—SUSSEX, COCK. [6 entries.]**

- I. (£1 10s.)—Sir GOMER BERRY, Bart.**
- II. (£1.)—EXECUTORS OF THE LATE LORD DEWAR.**
- III. (10s.) -J. H. BAKER & SON.**
- R.—Col. D. A. CHAYTOR.**
- V.H.C.—J. E. H. VENNING.**
- H.C.—Capt. L. G. M. WHITLEY.**

**CLASS 59.—SUSSEX, HEN. [9 entries.]**

- I. (£1 10s.)—EXECUTORS OF THE LATE LORD DEWAR.**
- II. (£1.)—C. N. GOODE.**
- III. (10s.)—Sir GOMER BERRY, Bart.**
- R.—Col. D. A. CHAYTOR.**
- V.H.C.—TREBILCOCK BROS.**
- H.C.—J. E. ATHERTON.**
- C.—J. E. ATHERTON.**

**CLASS 60.—LEGHORN, COCK. [5 entries.]**

- I. (£1 10s.)—EXECUTORS OF THE LATE LORD DEWAR.**
- II. (£1.)—W. J. RIDGE.**
- R.—G. ROGERS.**
- H.C.—J. BLACKWOOD.**

**CLASS 61.—LEGHORN, HEN. [6 entries.]**

- I. (£1 10s.)**—F. G. BIGG & SON.
- II. (£1.)**—EXECUTORS OF THE LATE LORD DEWAR.
- III. (10s.)**—F. G. BIGG & SON.
- R.**—J. H. BAKER & SON.
- H.C.**—J. H. NORMAN.

**CLASS 62.—RHODE ISLAND RED ,COCK. [13 entries.]**

- I. (£1 10s.)**—R. C. MERRIFIELD.
- II. (£1.)**—MAUNDER & SONS.
- III. 10s.)**—Miss J. WINGFIELD.
- R.**—EXECUTORS OF THE LATE LORD DEWAR.
- V.H.C.**—A. S. WARREN.
- H.C.**—G. H. MUZZLEWHITE.

**CLASS 63.—RHODE ISLAND RED, HEN. [11 entries.]**

- I. (£1 10s.)**—J. H. BAKER & SON.
- II. (£1.)**—W. TALL.
- III. (10s.)**—G. H. MUZZLEWHITE.
- R.**—S. F. HARRISON.
- V.H.C.**—S. J. PURCHASE.
- H.C.**—Dr. C. S. MYERS.

**CLASS 64.—ANY OTHER VARIETY, LIGHT BREED, COCK. [5 entries.]**

- I. (£1 10s.)**—J. H. BAKER & SON.
- II. (£1.)**—EXECUTORS OF THE LATE LORD DEWAR.
- R.**—R. F. HEARNshaw, *Scots Grey*.
- V.H.C.**—A. E. COLLETT.

**CLASS 65.—ANY OTHER VARIETY, LIGHT BREED, HEN. [9 entries.]**

- I. (£1 10s.)**—EXECUTORS OF THE LATE LORD DEWAR.
- II. (£1.)**—R. F. HEARNshaw, *Scots Grey*.
- III. (10s.)**—J. HEARN.
- R.**—Sergt. A. CLIFTON.
- V.H.C.**—T. HAY, *Ancona*.
- H.C.**—A. E. COLLETT.

**CLASS 66.—ANY OTHER VARIETY, HEAVY BREED, COCK. [11 entries.]**

- I. (£1 10s.)**—Mrs. E. MILLS, *Croad Langshan*.
- II. (£1.)**—R. F. HEARNshaw.
- III. (10s.)**—W. HAMBLy, *Buff Rock*.
- R.**—J. E. H. VENNING, *Australorp*.
- V.H.C.**—S. GILES, *Australorp*.
- H.C.**—Mrs. G. JOHNS, *Barnvelder*.

**CLASS 67.—ANY OTHER VARIETY, HEAVY BREED, HEN.** [9 entries.]

**I. (£1 10s.)**—EXECUTORS OF THE LATE LORD DEWAR.

**II. (£1.)**—MRS. E. MILLS, *Croad Langshan*.

**III. (10s.)**—J. H. BAKER & SON, *Barnvelder*.

**R.**—W. H. BREWER.

**H.C.**—J. H. NORMAN.

## **DUCKS, GEESE AND TURKEYS.**

**CLASS 68. DRAKE OR DUCK (AYLESBURY).** [8 entries.]

**I. (£1 10s.)** H. G. WESTON.

**II. (£1.)** H. G. WESTON.

**III. (10s.)** W. TALL.

**R.**—W. E. PAGE.

**V.H.C.**—W. TALL.

**H.C.**—A. LEWINGTON.

**CLASS 69.—DRAKE OR DUCK (ROUEN).** [7 entries.]

**I. (£1 10s.)**—ABBOT BROS.

**II. (£1.)**—S. SPINKE.

**III. (10s.)**—Rev. J. HEWETSON.

**R.**—S. SPINKE.

**H.C.**—R. CARPENTER.

**CLASS 70.—DRAKE OR DUCK (INDIAN RUNNER).** [11 entries.]

**I. (£1 10s.)**—W. J. HEWITT.

**II. (£1.)**—MRS. W. G. JACKA.

**III. (10s.)**—Rev. J. HEWETSON.

**R.**—ABBOT BROS.

**V.H.C.**—HORRELL & LOVELL.

**H.C.**—J. R. REDDECLIFFE.

**CLASS 71.—DRAKE OR DUCK (ANY OTHER VARIETY).** [4 entries.]

**I. (£1 10s.)**—ABBOT BROS.

**II. (£1.)**—R. BUTLAND, junr., *Cayuga*.

**R.**—G. F. GRIFFITHS.

**CLASS 72.—GANDER OR GOOSE.** [2 entries.]

**I. (£1 10s.)**—ABBOT BROS.

**R.**—S. OATEY.

**CLASS 73.—TURKEY, COCK OR HEN.** [3 entries.]

**I. (£1 10s.)**—ABBOT BROS.

**II. (£1.)**—A. S. WARREN.

The Prizes in Classes 74, 75 and 76 were given by the Devon County Council for residents in Devon.

**CLASS 74.—ONE DOZEN WHITE NEW LAID HENS EGGS. [5 entries.]**

**I. (15s.)—F. G. BIGGS & SON.**

**II. (10s.)—Miss P. E. TARR.**

**III. (5s.)—Miss P. E. TARR.**

**CLASS 75.—ONE DOZEN BROWN NEW LAID HENS EGGS. [9 entries.]**

**I. (15s.)—Mrs. J. B. SMITH.**

**II. (10s.)—Miss D. EARLE.**

**III. (5s.)—W. H. TURNER.**

**R.—Miss P. E. TARR.**

**H.C.—Mrs. J. B. SMITH.**

**CLASS 76.—ONE DOZEN TINTED NEW LAID HENS EGGS. [8 entries.]**

**I. (15s.)—Mrs. J. B. SMITH.**

**II. (10s.)—Miss P. E. TARR.**

**III. (5s.)—Mrs. E. B. BEER.**

**R.—Miss D. EARLE.**

**H.C.—COLLINGS BROS.**

## **PIGEONS.**

(Under N.P.A. Show Rules).

**CLASS 77.—POUTER, PIGMY OR CROPPER, COCK OR HEN. [10 entries.]**

**I. (£1.)—A. T. JUPE.**

**II. (10s.)—W. G. J. SLEEMAN.**

**III. (5s.)—A. T. JUPE.**

**R.—A. BLACKMAN.**

**V.H.C.—W. J. POOLE.**

**H.C.—J. VOISEY.**

**C.—F. T. GOAD.**

**CLASS 78.—DRAGON, COCK OR HEN. [8 entries.]**

**I. (£1.)—Miss N. DRAKE.**

**II. (10s.)—J. SPAVEN.**

**III. (5s.)—H. J. EVES.**

**R.—J. SPAVEN.**

**V.H.C.—H. J. EVES.**

**H.C.—H. J. EVES.**

**C.—A. E. HARRIS.**

**CLASS 79. MAGPIE (ANY COLOUR), COCK OR HEN. [7 entries.]**

- I. (£1.)**—C. H. CLOAD.
- II. (10s.)** C. H. CLOAD.
- III. (5s.)**—JAMES & PALMER.
- R.**—W. E. PROWSE.
- V.H.C.**—C. H. CLOAD.
- H.C.** JAMES & PALMER.
- C.** A. COOKE.

**CLASS 80. TUMBLER (LONG-FACED), COCK OR HEN. [8 entries.]**

- I. (£1.)** A. T. JYPE.
- II. (10s.)** —E. J. BOWEN.
- III. (5s.)** B. G. BALSDON.
- R.** M. HADDRELL.
- V.H.C.** C. AVERY. J. AVERY.

**CLASS 81.— JACOBIN (ANY COLOUR), COCK OR HEN. [8 entries.]**

- I. (£1.)** L. WRIGHT.
- II. (10s.)** M. HADDRELL.
- III. (5s.)** —H. W. WEBB.
- R.**—WILLIAMS BROS.
- V.H.C.** —G. SMALE.
- H.C.** —W. HOWGEGO.
- C.**—WILLIAMS BROS.

**CLASS 82.— ORIENTAL (ANY VARIETY), COCK OR HEN. [1 entry.]**

- II. (10s.)**—WATKINS BROS.

**CLASS 83.— NUN (ANY COLOUR), COCK OR HEN. [5 entries.]**

- I. (£1.)**—REYNOLDS BROS.
- II. (10s.)**—M. HADDRELL.
- R.**—REYNOLDS BROS.
- V.H.C.**—REYNOLDS BROS.
- C.**—WILLIAMS BROS.

**CLASS 84.— ARCHANGEL, COCK OR HEN. [7 entries.]**

- I. (£1.)**—H. W. WEBB.
- II. (10s.)**—C. A. EDWARDS.
- III. (5s.)**—H. W. WEBB.
- R.**—C. A. EDWARDS.
- V.H.C.**—H. W. WEBB.
- H.C.**—H. W. WEBB.
- C.**—C. A. EDWARDS.



**CLASS 85.—MODENA, COCK OR HEN. [8 entries.]****I. (£1.)—C. A. EDWARDS.****II. (10s.)—H. BEER.****III. (5s.)—H. BEER.****R.—J. H. LASHBROOK.****V.H.C.—H. BEER.****H.C.—H. W. WEBB.****C.—J. H. LASHBROOK.****CLASS 86.—FANTAIL (ANY COLOUR), COCK OR HEN. [6 entries.]****I. (£1.)—E. H. LEE.****II. (10s.)—G. SWEET.****III. (5s.)—G. SWEET.****R.—E. H. LEE.****V.H.C.—E. H. LEE.****C.—W. A. WILLIAMS.****CLASS 87.—SHOW HOMER, COCK OR HEN. [4 entries.]****I. (£1.)—A. T. JUPE.****II. (10s.)—F. G. BARNARD.****R.—F. G. BARNARD.****C.—L. WRIGHT.****CLASS 88.—WORKING HOMER, COCK. [18 entries.]****I. (£1.)—L. RIDGE.****II. (10s.)—WILLIAMS BROS.****III. (5s.)—F. H. BUSHEY.****R.—M. MARSH.****V.H.C.—J. P. TRANT.****H.C.—H. MARSH.****C.—G. A. NICKELS.****CLASS 89.—WORKING HOMER, HEN. [15 entries.]****I. (£1.)—J. OATWAY.****II. (10s.)—J. OATWAY.****III. (5s.)—H. MARSH.****R.—WILLIAMS BROS.****V.H.C.—F. W. FRY.****H.C.—G. ROWLAND.****C.—W. WHITE.**

CLASS 90.—ANY OTHER VARIETY, COCK. [13 entries.]

- I. (£1).—W. SMITH, *Trumpeter*.
- II. (10s.).—S. WOTTON.
- III. (5s.).—W. J. PENGELLY, *Red Exhibition Homer*.
- R.—M. HADDRELL.
- V.H.C.—C. AVERY, *Homer*.
- H.C.—L. WRIGHT, *Holle Cropper*.
- C.—A. BLACKMAN, *Scandaroon*.

CLASS 91.—ANY OTHER VARIETY, HEN. [8 entries.]

- I. (£1).—H. SMITH, *Trumpeter*.
- II. (10s.).—F. T. GOAD, *English Owl*.
- III. (5s.).—L. WRIGHT, *Scandaroon*.
- R.—W. J. PENGELLY, *Exhibition Homer*.
- V.H.C.—F. T. GOAD, *English Owl*.

CLASS 92.—SELLING CLASS (ANY VARIETY, NOT TO EXCEED £2),  
COCK OR HEN. [8 entries.]

- I. (£1).—A. T. JUPE, *Pouter*.
- II. (10s.).—Miss N. DRAKE, *Dragoon*.
- III. (5s.).—F. T. GOAD.
- R.—H. M. B. DUNFORD, *Pouter*.
- V.H.C.—A. BLACKMAN, *Scandaroon*.
- H.C.—C. AVERY, *Homer*.
- C.—A. E. HARRIS, *Dragoon*.

CLASS 93.—SELLING CLASS (ANY VARIETY, NOT TO EXCEED £1),  
COCK OR HEN. [11 entries.]

- I. (£1).—Miss N. DRAKE, *Dragoon*.
- II. (10s.).—A. T. JUPE, *Pouter*.
- III. (5s.).—W. SMITH, *Trumpeter*.
- R.—WATKINS BROS.
- V.H.C.—F. T. GOAD.
- H.C.—A. E. HARRIS, *Dragoon*.
- C.—C. H. CLOAD.

CHAMPION PRIZE.

*Best Pigeon exhibited in any of the Classes.*

- I. (£2).—A. T. JUPE.

**RABBITS.**

**CLASS 1.—ENGLISH (ANY COLOUR), 5 MONTHS OLD AND OVER.**  
[6 entries.]

**I. (£1.)—E. C. BASSETT.**

**II. (10s.)—J. JAMES.**

**III. (5s.)—C. EMMETT.**

**R.—W. T. KNIGHT.**

**V.H.C.—G. A. DRAKE.**

**H.C.—J. JAMES.**

**CLASS 2. ENGLISH (ANY COLOUR), UNDER 5 MONTHS OLD.**  
[5 entries.]

**I. (£1.)—MRS. W. H. CRANCH.**

**II. (10s.)—C. EMMETT.**

**R.—P. J. OZIER.**

**V.H.C.—MRS. W. H. CRANCH.**

**H.C.—T. J. KEMISH.**

**CLASS 3.—SILVER, ANY AGE.** [3 entries.]

**II. (10s.)—E. WALLINGTON.**

**III. (5s.)—E. WALLINGTON.**

**CLASS 4.—DUTCH (ANY COLOUR), 5 MONTHS OLD AND OVER.**  
[7 entries.]

**I. (£1.)—E. J. MEEK.**

**II. (10s.)—E. J. MEEK.**

**III. (5s.)—J. JAMES.**

**R.—J. HARVEY.**

**V.H.C.—W. T. PESSELL.**

**H.C.—E. T. GUSH.**

**C.—SILLIFANT BROS.**

**CLASS 5.—DUTCH (ANY COLOUR), UNDER 5 MONTHS** (8 entries.)

**I. (£1.)—E. GILBERT.**

**II. (10s.)—E. J. MEEK.**

**III. (5s.)—E. T. GUSH.**

**R.—J. HARVEY.**

**V.H.C.—J. JAMES.**

**H.C.—W. T. PESSELL.**

**C.—E. T. GUSH.—W. T. PESSELL.**

**CLASS 6.—CHINCHILLA, BUCK.** [11 entries.]

**I (£1.)—A. H. COUZENS.**

**II. (10s.)—MRS. E. J. LLOYD EDWARDS.**

**III. (5s.)—MRS. E. J. LLOYD EDWARDS.**

**R.—S. G. LOWE.**

**V.H.C.—L. F. SMITH & WILLIAMS.**

**H.C.**—HOMESTEAD RABBITRIES (L. B. Jackson).

**C.**—MISS E. P. WATSON.

**CLASS 7.**—CHINCHILLA, DOE. [8 entires.]

**I. (£1.)**—Dr. A. T. BETTISON.

**II. (10s.)**—Miss L. B. MACKENZIE.

**III. (5s.)**—A. H. COUZENS.

**R.**—Dr. A. T. BETTISON.

**V.H.C.**—G. & L. BLACKMORE.

**H.C.**—Miss M. THOMPSON.

**C.**—HOMESTEAD RABBITRIES (L. B. Jackson).

**CLASS 8.**—CHINCHILLA GIGANTA, UNDER 5 MONTHS. FIRST PRIZE,

£1—SECOND, 10s.—THIRD, 5s.

[No ENTRY.]

**CLASS 9.**—BEVERAN (ANY COLOUR), ANY AGE. [7 entries.]

**I. (£1.)**—F. J. EVANS.

**II. (10s.)**—Rev. F. J. PRIDEAUX.

**III. (5s.)**—A. C. E. DUNN.

**R.**—Mrs. B. A. BROWELL.

**V.H.C.**—Mrs. C. W. MAYER.

**H.C.**—HILL HEAD RABBIT FARM.

**C.**—Mrs. C. W. MAYER.

**CLASS 10.**—BELGIAN HARE, 5 MONTHS OLD AND OVER. [1 entry.]

**R.**—E. WALLINGTON.

**CLASS 11.**—BELGIAN HARE, UNDER 5 MONTHS—FIRST PRIZE, £1.—

SECOND, 10s.—THIRD, 5s.

[No ENTRY.]

**CLASS 12.**—HAVANA, ANY AGE. [11 entries.]

**I. (£1.)**—P. HOUGHTON.

**II. (10s.)**—P. HOUGHTON.

**III. (5s.)**—E. T. GUSH.

**R.**—E. T. GUSH.

**V.H.C.**—T. E. DINGLE.

**H.C.**—M. A. WALL (M.B., F.R.S., M.N.H.C., M.E. & D.S.).

**C.**—Mrs. E. M. BULKELEY.

**CLASS 13.**—TAN, ANY AGE. [6 entries.]

**I. (£1.)**—C. A. M. WOOD.

**II. (10s.)**—W. H. WALTER.

**III. (5s.)**—J. H. EVANS.

**R.**—C. A. M. WOOD.

**V.H.C.**—F. J. EVANS.

**H.C.**—J. H. EVANS.

**CLASS 14.—LILAC, ANY AGE. [2 entries.]**

- III. (5s.)—HOMESTEAD RABBITRIES** (L. B. Jackson).
- R.—HILL HEAD RABBIT FARM.**

**CLASS 15.—ANGORA, 5 MONTHS OLD AND OVER. [5 entries.]**

- II. (10s.)—C. R. NICHOLLS.**
- III. (5s.)—HOMESTEAD RABBITRIES** (L. B. Jackson).
- R.—Miss G. BELTON.**
- V.H.C.—W. E. M. COULL.**
- H.C.—W. G. HAMBLBY.**

**CLASS 16.—ANGORA, UNDER 5 MONTHS. [6 entries.]**

- I. (£1.)—Mrs. M. JEAFFRESON.**
- II. (10s.)—HILL HEAD RABBIT FARM.**
- III. (5s.)—L. F. SMITH & WILLIAMS.**
- R.—Mrs. A. BIRD.**

**CLASS 17.—ANY OTHER VARIETY, 5 MONTHS OLD AND OVER.**  
[13 entries.]

- I. (£1.)—Mrs. M. ARSCOTT, *Silver Fox*.**
- II. (10s.)—Miss E. P. WATSON, *Chin Rex*.**
- III. (5s.)—E. C. BASSETT, *Sable*.**
- V.H.C.—G. HARRISON, *Lop*.—Mrs. C. W. MAYER, *Argente Creme*.**
- H.C.—Mrs. E. J. LLOYD EDWARDS, *Marten Sable*.**
- C.—Miss E. M. LIND HENDRIKS, *Siamese Sable*.**

**CLASS 18.—ANY OTHER VARIETY, UNDER 5 MONTHS. [2 entries.]**

- II. (10s.)—HILL HEAD RABBIT FARM.**

**CLASS 19.—SELLING CLASS (ANY VARIETY), PRICE NOT TO EXCEED**  
**£1. [10 entries.]**

- I. £1.)—G. & L. BLACKMORE.**
- II. (10s.)—T. J. KEMISH, *Tortoise English*.**
- III. (5s.)—HILL HEAD RABBIT FARM.**
- R.—S. E. ABBOTT, *English Tortoise*.**
- V.H.C.—F. J. EVANS, *Black and Tan*.**
- H.C.—E. T. GUSH.**
- C.—E. J. MEEK, *Dutch*.—E. WALLINGTON.**

**CHAMPION PRIZE.**

**Best Rabbit exhibited in any of the Classes.**

- I.—Mrs. M. JEAFFRESON.**
- R.—E. GILBERT.**

## **FORESTRY SECTION.**

**CLASS 1.—FOR A GENERAL COLLECTION OF EXHIBITS ILLUSTRATIVE OF FORESTRY.** [4 entries.]

**I. (Gold Medal.)**—H. R. H. THE PRINCE OF WALES, K.G., Duchy of Cornwall Estate, Devon.

**II. (Silver Medal.)**—SAMUEL CHAPMAN, The Torquay Corporation Water Works, Town Hall, Torquay.

**III. (Bronze Medal.)**—FORTESCUE ESTATES COMPANY, Castle Hill Estate Office, near Barnstaple.

**CLASS 2.—FOR A LONGITUDINAL 3-FEET CUT TAKEN DOWN THE CENTRE OF A SPECIMEN OF CONIFEROUS TIMBER OF NOT MORE THAN 45 YEARS OF AGE.** [7 entries.]

**I. (Silver Medal.)**—SAMUEL CHAPMAN, The Torquay Corporation Water Works, Town Hall, Torquay.

**II. (Bronze Medal.)**—DARTINGTON HALL (LD.), Forestry Department, Dartington Hall, Totnes.

**CLASS 3.—FOR RARE OR ORNAMENTAL TREES, EXHIBITED BY NURSERYMEN.**—1st Prize, Silver Medal ; 2nd Prize, Bronze Medal.  
[No Entry.]

**CLASS 4.—FOR CONIFEROUS FOLIAGE.** [4 entries.]

**I. (Silver Medal.)**—Sir H. H. A. HOARE, Bart., Stourhead.

**II. (Bronze Medal.)**—H.R.H. THE PRINCE OF WALES, K.G., Duchy of Cornwall Estate, Devon.

**CLASS 5.—FOR ESTATE FOREST WORKING PLANS, CONFINED TO ESTATES WITH NOT LESS THAN 250 ACRES OF WOODLAND.** [5 entries.]

**I. (Silver Medal.)**—SAMUEL CHAPMAN, The Torquay Corporation Water Works, Town Hall, Torquay.

**CLASS 6.—FOR EXHIBITS CONTRIBUTED BY NURSERYMEN, INSTITUTIONS OR ESTATES NOT DESIROUS OF ENTERING IN COMPETITIVE CLASSES. (IN THIS CLASS THE JUDGE WAS EMPOWERED TO AWARD A CERTIFICATE TO ANY EXHIBIT OF SPECIAL MERIT).** [4 entries.]

**V.H.C.**—THE ENGLISH FORESTRY ASSOCIATION (LD.), The Knowle Nurseries, Caversham Heights, Reading.—SEALE HAYNE AGRICULTURAL COLLEGE, Newton Abbot.

**CLASS 7.—FOR EXAMPLES OF CREOSOTING BY PRESSURE OR ABSORPTION AND OF OTHER METHODS OF PRESERVATION**  
[3 entries.]

**I. (Silver Medal).—**THE GREAT WESTERN RAILWAY COMPANY, Swindon, Wilts.

**II. (Bronze Medal).—**Capt. W. BEST, Vivod, Llangollen.

**CLASS 8.—FOR EXHIBITS OF ENGLISH TIMBER WORKED UP FOR ESTATE, RAILWAY OR COMMERCIAL PURPOSES.** [4 entries.]

**I. (Silver Medal).—**THE GREAT WESTERN RAILWAY COMPANY, Swindon.

**II. (Bronze Medal).—**DARTINGTON HALL (LD.), Forestry Department, Dartington Hall, Totnes.

**V.H.C.—**FORTESCUE ESTATES COMPANY, Castle Hill Estate Office, near Barnstaple.

**H.C.—**Sir C. H. CAVE, Bart., J.P., Sidbury Manor Estate, near Sidmouth.

**CLASS 9.—FOR A 9-FEET FIELD GATE, MANUFACTURED FROM HOME-GROWN TIMBER, SHOWN IN WORKING ORDER. THE WOOD MUST NOT BE DRESSED WITH A PRESERVATIVE, CREOSOTED OR PAINTED.** [9 entries.]

**I. (Silver Medal).—**FORTESCUE ESTATES COMPANY, Castle Hill Estate Office, near Barnstaple.

**II. (Bronze Medal).—**Capt. W. BEST, Vivod, Llangollen.

**CLASS 10.—GATE SUITABLE FOR HUNTING PURPOSES.** [8 entries.]

**I. (£5).—**FORTESCUE ESTATES COMPANY, Castle Hill Estate Office, near Barnstaple.

**II. (£3).—**SAMUEL CHAPMAN, The Torquay Corporation Water Works, Town Hall, Torquay.

**III. (£2).—**DARTINGTON HALL (LD.), Forestry Department, Dartington Hall, Totnes.

**H.C.—**The Rt. Hon. Sir F. DYKE ACLAND, Bart., Killerton, Exeter.

**CLASS 11.—WATTLE SHELTER (HURDLES).—1st Prize, £3 ; 2nd Prize, £2 ; 3rd Prize, £1.** [1 entry.]

[No Award.]

### *SPECIAL PRIZE.*

*Given by the Royal English Arboricultural Society to be awarded for the Best Forestry Exhibit.*

**I.—**DARTINGTON HALL (LD.)

By an error in the Judge's slip the following awards were omitted:—

Class 1, Bronze Medal.—Dartington Hall, Ld.

Class 7, Silver Medal.—Dartington Hall, Ld.

# BATH & WEST & SOUTHERN COUNTIES SOCIETY.

## OBJECTS OF THE SOCIETY AND PRIVILEGES OF MEMBERSHIP.

### ANNUAL EXHIBITIONS.

THE Society annually holds an Exhibition in some city or town in England or Wales. Each section of the Society's district is visited at intervals, so that most Members have an opportunity of seeing the Show in their own neighbourhood every few years. Prizes to a large amount are given for Horses, Cattle, Sheep, Goats, Pigs, Farm Produce, &c. Provision is also made for the exhibition of Agricultural Implements and Machinery, Seeds, Cattle Foods, Artificial Manures, and articles of general utility. A substantially built and completely equipped working Dairy on a large scale is a special feature of these Exhibitions. Here explanatory demonstrations and comparative tests of processes are carried on, with the assistance of well-known practical and scientific experts, and Butter-making Competitions are held. Among the features of the Annual Meeting are Shoeing, Milking and other Competitions, Poultry and Horticultural Shows and Exhibitions, illustrative of Bee-keeping, Home Industries, Manufacturers, Rural Education and Research and Forestry.

*Membership entitles to free admission to the Annual Exhibition, to the unreserved portion of the Grand Stand overlooking the Horse and Cattle Ring, and to the use of the Members' Special Pavilion for Luncheons, Reading, Writing, &c.*

*Entries can be made by Members (elected on or before the last Tuesday in January preceding the Show, or who have paid two years' subscription before the date of closing of entries), at about half the fees payable by Non-Members.*

### THE JOURNAL.

*All Members receive free of charge the Society's Journal, which is published annually. Members can have their copy bound in cloth for an additional payment of 1s. 6d. It has for its aim the dissemination of agricultural knowledge in a popular form; and, in addition to original articles by well-known agricultural authorities, it contains particulars of the Society's general operations, full reports of its experimental and research work, prize awards, financial statements, list of Members, reviews of new books on agriculture, &c. (The price of the Journal to non-Members is 6s. 6d. post free.)*

### CHEMICAL AND OTHER FACILITIES.

The Society has a Consulting Chemist, from whom Members can obtain analyses and reports at reduced rates of charge. An arrangement has also been made under which Members of the Society can obtain, free of charge, from the National Fruit and Cider Institute at Long Ashton, analyses of cider-apples and perry-pears, and, with a view to assisting farmers and others in dealing with insect and other pests which affect agriculture, horticulture, &c., the Council have availed themselves of an offer from the Board of Economic Biology of the University of Bristol to investigate the nature of any insect or other pest and report upon it free of charge.



**EXPERIMENTS.**

Experiments on crops are conducted at experimental stations in various parts of the Kingdom, and *Members are enabled to take part in these and to receive reports thereon.*

**TERMS OF MEMBERSHIP.****ANNUAL SUBSCRIPTIONS.**

Governors, not less than .. .. .	£2
Ordinary Members, not less than .. .. .	£1
Tenant Farmers, the rateable value of whose holdings does not exceed £200 a year, not less than .. .. .	10s.

Governors, who are eligible for election as President or Vice-President, are entitled, in addition to the privileges already mentioned, to an extra Season Ticket for the Annual Exhibition and for the Grand Stand, &c., on application to the Secretary. Governors subscribing more than £2 are entitled to a further Ticket for every additional £1 subscribed.

Members subscribing less than £1 are entitled to all the privileges of Membership except that of entering Stock at reduced fees, and their admission Ticket for the Annual Show is available for *one day only*, instead of for the whole time of the Exhibition.

**LIFE COMPOSITIONS.**

Governors may compound for their Subscription for future years by payment, in advance, of £20; and Members by payment, in advance, of £10. Governors and Members who have subscribed for twenty years may become Life Members on payment of half these amounts.

Any person desirous of joining the Society can be proposed by a Member, or by the Secretary, 3, Pierrepont Street, Bath.

**Telegraph and Telephone—3010, Bath.**

# BATH & WEST & SOUTHERN COUNTIES SOCIETY.

## GENERAL LAWS.

*As revised in accordance with the Report of a Special Committee ; which Report was received and adopted by the Annual General Meeting of Members, held on May 19, 1923.*

## COMPOSITION OF THE SOCIETY.

I. The Society shall consist of a President, Vice-Presidents, Trustees, Council, Treasurer, Secretary, and Members.

## OBJECTS.

II. The Society shall have the following objects :—

- (a) To hold Exhibitions of breeding stock, agricultural implements, and such other articles connected with agriculture, horticulture, arts, manufactures or commerce, as may be determined upon by the Council.
- (b) To conduct practical and scientific investigations in agriculture and horticulture.
- (c) To promote technical education in agriculture and horticulture by providing means of systematic instruction.
- (d) To publish a Journal for circulation.

## SUBSCRIPTIONS.

III. The Annual Subscription for Members shall be as follows :—

Governors (who are eligible for election as President or Vice-President), not less than .. .. .	£2
Ordinary Members, not less than .. .. .	£1
Tenant Farmers (the rateable value of whose holdings does not exceed £200 a year), not less than .. .. .	10s.

IV. The payment of £20 in one sum shall constitute a Governor for life, and of £10 in one sum, an Ordinary Member for life ; but any Governor who has subscribed not less than £2 annually for a period of twenty years may become a Life Governor on the further payment of £10 in one sum ; and any Ordinary Member, who has subscribed not less than £1 annually for the same period may become a Life-Member on the further payment of £5 in one sum.

V. Subscriptions shall become due and be payable in advance on the 1st of January in each year or as soon as the Subscriber has been elected a Member. When the election takes place during the last quarter of the year, the subscription payable on election will be considered as applying to the ensuing year.

VI. A Member shall be liable to pay his subscription for the current year unless he shall have given notice, in writing, to the Secretary before January 1st, of his intention to withdraw.

# GOVERNING BODY.

VII. The entire management of the Society—including the making of Bye-laws, election of Members, determining the Prizes to be awarded, appointing Committees, fixing the places of Meetings and Exhibitions, appointing or removing the Treasurer, Secretary, and such other officers as may be required to carry on the business of the Society—shall be vested in the Council who shall report its proceedings at the Annual Meeting of the Society.

VIII. The Council shall consist of the Patron (if any), President, Vice Presidents, Trustees, and Treasurer (who shall be *ex-officio* Members), and of sixty-six elected Members.

## ELECTION OF PRESIDENT, VICE-PRESIDENTS, TRUSTEES AND COUNCIL.

IX. The election of a President for the year, of any additional Vice-Presidents, or Trustees, and of the Members of Council representing the Divisions named in Law X, shall take place at the Annual Meeting of the Society, and they shall enter into office at the conclusion of the Exhibition during which such Annual Meeting has been held

X. The sixty six Members of the Council referred to in Laws VIII and IX. shall consist of fifty-eight persons residing or representing property in the following Divisions, viz —

Twelve from the Counties of Devon and Cornwall, which shall be called the Western Division.

Twenty-four from the Counties of Somerset, Dorset and Wilts, which shall be called the Central Division ;

Twelve from the Counties of Hants, Berks, Oxon, Bucks, Middlesex, Surrey, Sussex and Kent, which shall be called the Southern Division ; and

Ten from the Counties of Worcester, Gloucester, Hereford and Monmouth, and the Principality of Wales, which shall be called the North-Western Division

The remaining eight shall be elected (irrespective of locality) from the general body of members, and shall form a Division which shall be called the " Without Reference to District " Division

XI One half of the elected Members in each of the five Divisions named in Law X. shall retire annually by rotation, but shall be eligible for re-election.

XII. The Council shall have power to nominate a President, Vice-Presidents, Trustees, and Members of Council for the approval of the Annual Meeting, and to fill up such vacancies in their own body as are left after the Annual Meeting, or as may from time to time occur during the interval between the Annual Meetings.

XIII. Nominations to offices, election to which is vested in the whole body of Members must reach the Secretary ten days before the meeting, at which such vacancies are to be filled up

## MEETINGS.

XIV. The Annual Meeting of the Society shall take place during the holding of the annual Exhibition.

XV. Special General Meetings of the Society may be convened by the President on the written requisition of not less than three Members of the Council ; and all Members shall have ten days' notice of the object for which they are called together.

XVI. No Member of less than three months' standing, or whose subscription is in arrear, shall be entitled to vote at a Meeting.

### **EXHIBITIONS.**

**XVII.** The Annual Exhibition of the Society shall be held in different Cities or Towns in successive years.

**XVIII.** All Exhibitors shall pay such fees as may be fixed by the Council. Members subscribing not less than £1 per annum, who have been elected previous to February 1st, and have paid the subscription for the current year, or if elected later, who pay a subscription for the previous year and the current subscription, before the date of closing of entries, shall be entitled to exhibit at such reduction in these fees as the Council shall determine.

### **PRIZES.**

**XIX.** All prizes offered at the cost of the Society shall be open for competition to the United Kingdom.

**XX.** No person intending to compete for any prize offered at the annual Exhibition shall be eligible to act as a judge or to have any voice in the selection of judges to award the premiums in the department in which he exhibits.

**XXI.** If it be proved to the satisfaction of the Council that any person has attempted to gain a prize in this, or in any other society, by a false certificate or by a misrepresentation of any kind, such person shall thereupon be, for the future, excluded from exhibiting in this Society.

### **JOURNAL.**

**XXII.** The Proceedings of the Society, Awards of Prizes, Financial Statements and Lists of Officers, Governors, and Members, shall be printed annually in the Society's *Journal*, and every Governor and Member, not in arrear with his subscription, shall be entitled to receive one copy, free of expense, and there shall be an additional number printed for sale.

### **POLITICS.**

**XXIII.** No motion or question of a political tendency shall be introduced at any meeting of the Society, otherwise than with the consent of two-thirds of the members present at any meeting, and then only after 14 days' notice in writing.

### **ALTERATIONS IN LAWS.**

**XXIV.** No new General Law shall be made or existing one altered, added to or rescinded, except at an Annual or Special General Meeting, and then only provided that a statement of particulars, in writing, shall have been sent to the Secretary at least twenty-one days previous to the Meeting at which the question is to be considered.

## ANNUAL EXHIBITIONS.

Year.	Place Visited	Local Subscription	Prizes.			Total Local Contribution.	President.	Admissions.		
			Local Committee.	Local Societies	Local Residents.			On 2/6 Days.	On 1/- Days.	Total.
		£	£	£	£	£				
1856	Yeovil	450	..	..	..	450	C. A. Moody, M.P.	..	..	..
1857	Newton Abbot	700	..	..	..	700	Lord Courtenay	..	..	..
1858	Cardiff	800	..	..	..	800	Lord Courtenay	..	..	..
1859	Barnstaple	800	85	..	81	966	John Sillifant	..	..	..
1860	Dorchester	900	..	..	..	900	Lord Rivers	10,709	11,949	22,658
1861	Truro	900	..	..	..	900	J. W. Buller, M.P.	15,201	14,220	29,421
1862	Wells	900	..	..	..	900	Sir T. D. Acland, Bart.	10,578	4,775	15,353
1863	Exeter	900	..	..	..	900	Marquis of Bath	15,635	19,284	34,919
1864	Bristol	1000	106	..	50	1156	Earl Fortescue	22,377	65,678	88,055
1865	Hereford	900	358	..	..	1258	Lord Taunton	16,575	35,261	51,836
1866	Salisbury	900	57	..	..	957	{ Earl of Portsmouth J. Tremayne	7,288	18,737	26,025
1867	Salisbury	..	..	..	..	900	Sir J. T. B. Duckworth, Bart.	7,502	16,702	24,204
1868	Falmouth	900	..	..	..	900	Earl of Carnarvon	11,393	19,495	30,888
1869	Southampton	900	132	..	18	1050	Sir S. H. Northcote, Bart., C.B., M.P.	15,340	41,290	56,630
1870	Taunton	900	..	..	..	900	Earl of Carnarvon	17,952	33,653	51,605
1871	Guildford	900	110	..	..	1010	Earl of Cork	10,656	23,406	34,062
1872	Dorchester	800	..	..	10	810	Duke of Marlborough, K.G.	12,791	21,517	34,308
1873	Plymouth	800	..	400	..	1200	Earl of Mount-Edgumbe	16,665	45,744	62,409
1874	Bristol	800	403	..	..	1203	Sir Massey Lopes, Bart., M.P.	37,329	72,791	110,120
1875	Croydon	800	245	..	..	1045	R. Benyon, M.P.	14,518	26,028	40,546
1876	Hereford	800	381	..	..	1181	Earl of Ducie	16,396	32,645	49,041
1877	Bath	800	215	..	..	1015	Marquis of Lansdowne	27,625	48,852	76,477
1878	Oxford	800	..	170	6	976	Earl of Jersey	12,414	26,995	39,409
1879	Exeter	800	..	..	10	810	Earl of Morley	14,634	40,533	55,167
1880	Worcester	800	..	254	..	1054	Earl of Coventry	8,415	37,675	46,090

## ANNUAL EXHIBITIONS—continued.

Year	Place Visited.	Local Subscription.	Prizes.				Total Local Contribution.	President.	Admissions.			
			Local Committee.	Local Societies.	Local Residents.	£			On 5/- Day.	On 2/- Days.	On 1/- Days.	Total.
1881	Tunbridge Wells	£ 800	£ 245	£ 34	£ ..	1079	Marquis of Abergavenny	..	13,368	33,236	33,236	46,604
1882	Cardiff	800	200	198	17	1215	Lord Tredegar	..	23,941	38,680	38,680	62,621
1883	Bridgewater	800	78	..	..	878	Lord Brooke, M.P.	..	17,171	31,241	31,241	48,412
1884	Maidstone	800	310	33	75	1218	Viscount Holmesdale	..	13,501	31,053	31,053	44,554
1885	Brighton	800	227	33	82	1142	Viscount Hampden	..	9,637	39,851	39,851	49,488
1886	Bristol	800	525	..	..	1325	Lord Carlisle	..	29,580	70,999	70,999	100,579
1887	Dorchester	800	..	112	..	912	Earl of Devesey	..	8,860	29,846	29,846	38,706
1888	Newport (Mon.)	800	100	..	..	900	Lord Tredegar	..	14,378	38,567	38,567	53,445
1889	Exeter	800	..	..	10	810	Lord Clinton	..	16,405	36,195	36,195	52,600
1890	Rochester	800	294	..	26	1120	Earl of Darnley	..	3,480	48,314	48,314	51,794
1891	Bath	800	50	103	100	1053	Earl Temple	..	23,510	52,185	52,185	75,695
1892	Swansea	800	200	100	10	1110	Sir J. D. T. Llewellyn, Bart.	..	18,364	54,609	54,609	72,973
1893	Gloucester	800	400	..	..	1200	Lord Fitzhardinge	..	14,272	40,368	40,368	54,640
1894	Guildford	800	174	..	10	984	Earl of Onslow	..	8,671	29,813	29,813	38,484
1895	Taunton	800	85	160	10	1055	Viscount Portman	..	13,181	30,111	30,111	43,292
1896	St. Albans	800	152	..	..	952	Earl of Clarendon	..	12,056	22,380	22,380	34,436
1897	Southampton	800	50	..	..	850	Lord Montagu of Beaulieu	..	8,284	33,750	33,750	42,034
1898	Cardiff	800	200	..	..	1000	Lord Windsor	..	13,101	42,501	42,501	55,602
1899	Exeter	800	..	225	5	1030	Lord Clinton	..	16,091	39,832	39,832	55,923
1900	Bath	800	100	150	10	1060	Marquis of Bath	..	11,601	36,814	36,814	49,369
1901	Croydon	800	115	..	..	915	Marquis of Bath (H.R.H. The Duke of Cornwall and York, K.G.)	954 1,196	9,362	30,693	30,693	41,251
1902	Plymouth	800	105	100	36	1041	Earl of Morley	..	12,629	40,565	40,565	54,036
1903	Bristol	800	434	50	61	1345	Duke of Beaufort	..	34,528	74,352	74,352	108,880
1904	Swansea	800	350	..	..	1150	Lord Windsor	..	28,265	50,562	50,562	78,827
1905	Nottingham	800	..	218	..	1018	Duke of Portland, K.G.	..	8,913	45,964	45,964	54,877
1906	Swindon	800	..	200	50	1050	Earl of Radnor	..	7,838	42,013	42,013	49,851

# ANNUAL EXHIBITIONS—continued.

(cxviii)

Year.	Place Visited.	Local Subscription.	Prizes.			Total Local Contribution.	President	Admissions.			
			Local Committee.	Local Societies.	Local Residents.			On 5/- Day.	On 2/6 Days.	On 3/- Days.	On 1/- Days.
1907	Newport (Mon.)	£ 800	£ 201	£ 51	£ 29	£ 1081	H.R.H. The Prince of Wales, K.G.	..	16,236	37,819	54,055
1908	Dorchester .	800	100	25	..	925	Lord Digby .	..	12,227	20,350	32,577
1909	Exeter .	800	..	100	..	900	Lord Clinton .	..	14,898	41,891	56,789
1910	Rochester and Chatham .	800	117	..	..	917	Earl of Darnley .	..	5,892	20,105	25,997
1911	Cardiff .	800	195	110	10	1115	Marquis of Bute .	..	16,213	40,588	56,801
1912	Bath .	800	100	100	..	1000	Marquis of Bath .	..	13,843	40,935	54,786
1913	Truro .	800	35	115	39	918	Viscount Falmouth .	..	12,918	44,700	57,618
1914	Swansea .	800	301	..	..	1101	Sir J. T. D. Llewelyn, Bart.	..	17,957	67,805	85,762
1915	Worcester .	400	..	257	..	657	The Earl of Coventry .	..	7,760	28,013	35,773
1916 to 1919	No Shows						The Earl of Coventry .		4/-	2/-	
1920	Salisbury .	800	24	105	131	1060	The Earl of Radnor .	..	19,392	25,255	44,647
1921	Bristol .	800	1000	354	..	2154	The Lord Bledisloe, K.B.E. .	5105	36,068	58,473	99,646
1922	Plymouth .	800	132	281	..	1213	H.R.H. The Prince of Wales, K.G.	4124	19,289	34,856	58,269
1923	Swansea .	800	295	..	200	1295	H.R.H. The Prince of Wales, K.G.	434	12,286	78,162	115,345
1924	Taunton .	800	29	100	..	929	Sir Dennis F. Boles, Bart.C.B.E., D.L. .	2267	9,693	17,882	45,943
1925	Maidstone .	800	122	100	..	1022	Col.F.S.W. Cornwallis,C.B.E.,D.L. .	2019	3,618	7,206	38,496
1926	Watford .	800	28	171	..	999	The Earl of Clarendon .	1442	2,667	4,869	23,249
1927	Bath .	800	149	..	..	949	H.R.H. The Duke of York, K.G.	2674	6,784	11,961	49,512
1928	Dorchester .	800	184	100	13	1097	Lord Wynford, D.S.O. .	1772	5,543	18,152	45,301
1929	Swindon .	800	..	100	10	910	Maj.-General T. C. P. Calley, C.B., M.V.O. .	4061	4,927	7,658	30,281
1930	Torquay .	800	..	250	16	1066	Lord Mildmay of Flete, P.C., T.D.	7061	15,944	12,771	50,876
1931	Bristol .	800	450	50	..	1300	The Duke of Beaufort, G.C.V.O.				

## MEMBERS' PRIVILEGES.

ANALYSES OF FERTILISERS, FEEDING STUFFS,  
WATERS, SOILS, &c.

(Applicable only to the case of Persons who are not commercially engaged in the manufacture or sale of any substance sent for Analysis).

Members of the Bath and West and Southern Counties Society, who may also be Members of other Agricultural Societies, are particularly requested in applying for Analyses, to state that they do so as Members of the first-named Society.

THE following are the rates of charges for Chemical Analyses to Members of the Society.

These privileges are applicable only when the analyses are for *bona-fide* agricultural purposes, and are required by Members of the Society for their own use and guidance in respect of farms or land in their own occupation and within the United Kingdom.

The analyses are given on the understanding that they are required for the individual and sole benefit of the Member applying for them, and must not be used for other persons, or for commercial purposes.

Land or estate agents, bailiffs, and others, when forwarding samples are required to state the names of those Members on whose behalf they apply.

Members are also allowed to send for analysis under these privileges, any manures or feeding-stuffs to be used by their outgoing tenants, or which are to be given free of cost to their occupying tenants.

The analyses and reports may not be communicated to either vendor or manufacturer, except in cases of dispute.

Members are requested, when applying for an analysis, to quote, the number in the subjoined schedule under which they wish it to be made.

No		
1.	An opinion of the purity of bone-dust or oil-cake (each sample)	2s. 6d.
2.	An analysis of sulphate or muriate of ammonia, or of nitrate of soda, together with an opinion as to whether it be worth the price charged	5s.
3.	An analysis of guano, showing the proportion of moisture, organic matter, sand, phosphate of lime, alkaline salts and ammonia, together with an opinion as to whether it be worth the price charged	10s.
4.	An analysis of mineral superphosphate of lime for soluble phosphates only, together with an opinion as to whether it be worth the price charged	5s.
5.	An analysis of superphosphate of lime, dissolved bones, etc., showing the proportions of moisture, organic matter, sand, soluble and insoluble phosphates, sulphate of lime and ammonia, together with an opinion as to whether it be worth the price charged	10s.
6.	An analysis of bone-dust, basic slag, or any other ordinary artificial manure, together with an opinion as to whether it be worth the price charged	10s.
7.	An analysis of compound artificial manures, animal products, refuse substances used for manure, etc.	from 10s. to £1
8.	An analysis of limestone, showing the proportion of lime	7s. 6d.
9.	An analysis of limestone, showing the proportion of lime and magnesia	10s.
10.	An analysis of limestone or marls, showing the proportion of carbonate, phosphate, and sulphate of lime and magnesia, with sand and clay	10s.
11.	Partial analysis of a soil, including determinations of clay, sand, organic matter, and carbonate of lime	£1
12.	Complete analysis of a soil	£3
13.	An analysis of oil-cake or other substances used for feeding purposes, showing the proportion of moisture, oil, mineral matter, albuminous matter, and woody fibre as well as of starch, gum, and sugar in the aggregate; and an opinion of its feeding and fattening or milk-producing properties	10s.
14.	Analysis of any vegetable product	10s.
15.	Determination of the "hardness" of a sample of water before and after boiling	5s.
16.	Analysis of water of land-drainage, and of water used for irrigation	£1
17.	Analysis of water used for domestic purposes	£1 10s
18.	An analysis of milk (to assist Members in the management of their Dairies and Herds, <i>bona fide</i> for their own information and not for trade purposes, nor for use in connection with the Sales of Food and Drugs Acts)	5s.
19.	Personal consultation with the Consulting Chemist. (To prevent disappointment it is suggested that Members desiring to hold a consultation with the Consulting Chemist should write to make an appointment)	5s.
20.	Consultation by letter	5s.
21.	Consultation necessitating the writing of three or more letters	10s.

Members wishing to exercise their privileges on the above-named terms, should forward their samples for examination by post or parcel prepaid, to the Consulting Chemist, DR. JOHN AUGUSTUS VOELCKER, C.I.E., M.A., F.I.C., Stuart House, 1, Tudor Street, London, E.C.

The fees for analysis must be sent to the Consulting Chemist at the time of application.



## GUIDE TO PURCHASERS OF FERTILISERS AND FEEDING STUFFS.

Purchasers are recommended in every case to insist upon having an *Invoice* given to them. This invoice should set out clearly:—

In the case of **Fertilisers**—

- (1) The **name** of the fertiliser ;
- (2) Whether the fertiliser be artificially **compounded** or not ;
- (3) The **analysis** guaranteed in respect of the principal fertilising ingredients.

In the case of **Feeding-Stuffs**—

- (1) The **name** of the article ;
- (2) The **description** of the article ; whether it has been made from one substance or seed only, or from more than one ;
- (3) The **analysis** guaranteed in respect of Oil and Albuminoids.

**NOTE.**—The use of terms “Linseed-cake,” “Cotton-cake,” etc., implies that these cakes shall be “pure,” and purchasers are recommended to insist upon these terms being used without any qualification, such as “95 per cent.,” “as imported,” etc. “Oil-cake” should be avoided.

Members of the Society should see that the **Invoices** agree accurately with the orders given by them, and, in giving these orders, they should stipulate that the goods come up to the guarantee set out in the following list, and that they be sold subject to the analysis and report of the Consulting Chemist of the Bath and West and Southern Counties Society.

### FERTILISERS.

**Raw Bones, Bone-meal, or Bone-dust** to be guaranteed “**PURE**,” and to contain not less than 45 per cent. of Phosphate of Lime, and not less than 4 per cent. of Ammonia.

**Steamed or “Degelatinised” Bones** to be guaranteed “**PURE**,” and to contain not less than 55 per cent. of Phosphate of Lime, and not less than 1 per cent. of Ammonia.

**Mineral Superphosphate of Lime** to be guaranteed to contain a certain percentage of “Soluble Phosphate.” (From 25 to 28 per cent. of Soluble Phosphate is an ordinarily good quality.)

**Dissolved Bones** to be guaranteed to be “made from raw bone and acid only,” and to be sold as containing stated percentages of Soluble Phosphate, Insoluble Phosphates, and Ammonia.

**Compound Artificial Manures, Bone Manures, Bone Compounds, etc.,** to be sold by analysis stating the percentages of Soluble Phosphate, Insoluble Phosphates and Ammonia contained.

**Basic Slag** to be guaranteed to contain a certain percentage of Phosphoric Acid and to be sufficiently finely ground that 80 to 90 per cent. passes through a sieve having 10,000 meshes to the square inch.

**Peruvian Guano** to be described by that name, and to be sold by analysis stating the percentages of Phosphates and Ammonia.

**Sulphate of Ammonia** to be guaranteed to be “**PURE**,” and to contain not less than 24 per cent. of Ammonia.

**Nitrate of Soda** to be guaranteed to be “**PURE**,” and to contain 95 per cent. of Nitrate of Soda.

**FEEDING-STUFFS.**

**Linseed Cake, Cotton Cake** (Decorticated and Undecorticated), and **Rape Cake** (for feeding purposes) to be pure, i.e., prepared *only* from one kind of seed from which their name is derived, and to be in sound condition. The report of the Consulting Chemist of the Bath and West and Southern Counties Society to be conclusive as to the "purity" or otherwise of any feeding-stuffs. The percentages of Oil and Albuminoids must also be guaranteed.

**Mixed Feeding Cakes, Meals, etc.,** to be sold on a guaranteed analysis.

All Feeding-Stuffs to be sold in sound condition, and to contain nothing of an injurious nature or worthless for feeding purposes.

## INSTRUCTIONS FOR SELECTING AND SENDING SAMPLES FOR ANALYSIS.

**GENERAL RULES.**

1. A sample taken for analysis should be fairly *representative of the bulk* from which it has been drawn.
2. The sample should reach the Analyst *in the same condition* as it was at the time when drawn.

**FERTILISERS.**

When **Fertilisers** are delivered in bags, select four or five of these from the bulk, and either turn them out on a floor and rapidly mix their contents, or else drive a shovel into each bag and draw out from as near the centre as possible a couple of shovelfuls of the manure, and mix these quickly on a floor.

Halve the heap obtained in either of these ways, take one-half (rejecting the other) and mix again rapidly, flattening down with the shovel any lumps that appear. Repeat this operation until at last only some three or four pounds are left.

From this fill three tins, holding from 1lb. to 1lb. each, mark, fasten up and seal each of these. Send one for analysis, and retain the others for reference.

Or—the manure may be put into glass bottles provided with well-fitting corks, the bottles should be labelled and the corks sealed down. The sample sent for analysis can be packed in a wooden box and sent by post or rail.

When manures are delivered in bulk, portions should be successively drawn from *different parts* of the bulk, the heap being turned over now and again. The portions drawn should be thoroughly mixed, sub-divided, and, finally, samples should be taken as before, except that when the manure is coarse and bulky it is advisable to send larger samples than when it is in a finely-divided condition.

**FEEDING-STUFFS.**

**Linseed, Cotton, and other Feeding Cakes.**—If a single cake be taken, three strips should be broken off right across the cake and from the middle portion of it, one piece to be sent for analysis, and the other two retained for reference. Each of the three pieces should be marked, wrapped in paper, fastened up and sealed. The piece forwarded for analysis can be sent by post or rail.

A more satisfactory plan is to select four to six cakes from different parts of the delivery, then break off a piece about four inches wide from the middle of each cake, and pass these pieces through a cake-breaker. The broken cake should then be well mixed, and three samples of about 1lb. each should be taken and put in tins or bags duly marked, fastened, and sealed as before. One of

these lots should be sent for analysis, the remaining two being kept for reference. It is advisable also, with the broken pieces, to send a small strip from an unbroken cake.

**Feeding Meals, Grain, etc.**—Handfuls should be drawn from the centre of half-a-dozen different bags of the delivery; these lots should then be well mixed, and three  $\frac{1}{2}$  lb. tins or bags filled from the heap, each being marked, fastened up, and sealed. One sample is to be forwarded for analysis and the others retained for reference.

### SOILS, WATERS, &c.

**Soils.**—Have a wooden box made, 6 inches in length and width, and from 9 to 12 inches deep, according to the depth of soil and subsoil of the field. Mark out in the field a space of about 12 inches square; dig round in a slanting direction a trench, so as to leave undisturbed a block of soil and its subsoil 9 to 12 inches deep; trim this block to make it fit into the wooden box, invert the open box over it, press down firmly, then pass a spade under the box and lift it up gently, turn over the box, nail on the lid, and send by rail. The soil will then be received in the position in which it is found in the field.

In the case of very light, sandy, and porous soils, the wooden box may be at once inverted over the soil and forced down by pressure, and then dug out.

**Waters.**—Samples of water are best sent in glass stoppered Winchester bottles holding half a gallon. One such bottle is sufficient for a single sample. Care should be taken to have these scrupulously clean. In taking a sample of water for analysis it is advisable to reject the first portion drawn or pumped, so as to obtain a sample of the water when in ordinary flow. The bottle should be rinsed out with the water that is to be analysed, and it should be filled nearly to the top. The stopper should be secured with string, or be tied over with linen or soft leather. The sample can then be sent carefully packed either in a wooden box with sawdust, etc., or in a hamper with straw.

**Milk.**—A pint bottle should be sent in a wooden box

### GENERAL INSTRUCTIONS.

**Time for Taking Samples.**—All samples, both of fertilisers and feeding-stuffs, should be taken as soon after their delivery as possible, and should reach the Analyst within *ten days* after delivery of the article. In every case it is advisable that the Analyst's certificate be received before a fertiliser is sown or a feeding-stuff is given to stock.

**Procedure in the event of the Vendor wishing Fresh Samples to be Drawn.**—Should a purchaser find that the Analyst's certificate shows a fertiliser or feeding-stuff not to come up to the guarantee given him, he may inform the vendor of the result and complain accordingly. He should then send to the vendor *one* of the two samples which he has kept for reference. If, however, the vendor should demand that a fresh sample be drawn, the purchaser must allow this, and also give the vendor an opportunity of being present, either in person or through a representative whom he may appoint. In that case, three samples should be taken in the presence of both parties with the same precautions as before described, *each* of which should be duly packed up, labelled and *sealed* by both parties. One of these is to be given to the vendor, one is to be sent to the Analyst, and the third is to be kept by the purchaser for reference or future analysis if necessary.

All samples intended for the Consulting Chemist of the Society should be addressed (postage or carriage prepaid), to Dr. J. AUGUSTUS VOELCKER, C.I.E., M.A., F.I.C., Stuart House, 1, Tudor Street, New Bridge Street, London, E.C. Separate letters of instruction should be sent at the same time.

Bath and West and Southern Counties Society	..	..	£3,9	10	0
Bristol Local Committee	..	..	450	0	0
Society of Merchant Venturers, Bristol	..	..	50	0	0
Suffolk Horse Society	..	..	10	0	0
British Percheron Horse Society	..	..	30	0	0
Hunters' Improvement and National Light Horse Breeding Society	..	..	9	0	0
Arab Horse Society	..	..	25	0	0
Devon Cattle Breeders' Society	..	..	47	0	0
South Devon Herd Book Society	..	..	12	12	0
Shorthorn Society	..	..	30	0	0
Dairy Shorthorn Association	..	..	20	0	0
Hereford Herd Book Society	..	..	20	0	0
Gloucestershire Cattle Society	..	..	10	0	0
British Friesian Cattle Society	..	..	46	5	0
English Aberdeen-Angus Cattle Association	..	..	10	0	0
Red Poll Cattle Society	..	..	20	0	0
Ayrshire Cattle Herd Book Society (The English Committee)	..	..	25	0	0
Blue Albion Cattle Society	..	..	17	0	0
English Jersey Cattle Society	..	..	10	0	0

**DONORS OF MONEY PRIZES continued.**

English Guernsey Cattle Society .. ..	25	0	0
Devon Closewool Sheep Breeders' Society .. ..	10	0	0
Hampshire Down Sheep Breeders' Association .. ..	30	0	0
Oxford Down Sheep Breeders' Association .. ..	10	0	0
Dorset Horn Sheep Breeders' Association .. ..	15	0	0
Dorset Down Sheep Breeders' Association .. ..	15	0	0
Exmoor Horn Sheep Breeders' Society .. ..	17	0	0
Suffolk Sheep Society .. ..	10	0	0
Ryeland Flock Book Society .. ..	10	0	0
Dartmoor Sheep Breeders and Flock Book Association ..	10	0	0
Kerry Hill Flock Book Society .. ..	10	0	0
British Goat Society .. ..	10	0	0
Large Black Pig Society .. ..	12	0	0
National Pig Breeders' Association .. ..	29	0	0
Gloucester Old Spots Pig Society .. ..	16	0	0
National Long White Lop-Eared Pig Society .. ..	5	0	0
Somerset County Council .. ..	66	0	0
Cups, Medals, etc .. ..	350	0	0
	<hr/>		
	£5,482	7	0

**DONORS OF MEDALS, PLATE, ETC.**

Bath and West Society.	Red Poll Cattle Society.
Shire Horse Society.	Ayrshire Cattle Society.
Corporation of Bath.	Dexter Cattle Society.
Hunters' Improvement & National	English Jersey Cattle Society.
Light Horse Breeding Society.	H. Leyborne Popham, Esq.
Arab Horse Society.	Ryeland Sheep Society.
National Pony Society.	British Goat Society.
Shetland Pony Society.	National Pig Breeders' Association.
National Horse Association of Great	Large Black Pig Society.
Britain.	Gloucester Old Spots Pig Society.
Hackney Horse Society.	Bennett & Howard.
A Member of the Society.	National Long White Lop-eared Pig
British Show Jumping Association.	Society.
Sussex Herd Book Society.	Lord Mildmay of Flete.
British Friesian Cattle Society.	Capewell Horse Nail Society.
Aberdeen-Angus Cattle Society.	Godwin, Warren & Co. (Ld.).
English Aberdeen-Angus Cattle	Columbian Wyandotte Club.
Society.	

An Animal can be entered in as many Classes as it is eligible for on payment of an additional fee in each Class. No additional fee is, however, payable in the case of those Prizes headed as Champion or Special Prizes.

## PRIZES.

The prizes in Classes 43 and 44 and the Special Local Prize in the Shire Horse Classes are offered by the Bristol Society of Merchant Venturers and the prizes in Classes 12, 50, 51, 57, 60, 148, 149, the Special Local Prizes in the Children's Riding and Jumping Classes, £34 towards the general prizes, and the prizes for Milk Recorded, Dairy and Pig Herds and for Allotments are contributed by the Bristol Local Committee.

### HORSES.

Animals entered in Classes 1 to 11 must be in the Yard before 8 a.m. on Wednesday, May 20, and must remain in the Yard till 6 p.m. on Saturday, May 23.

First Prize. £	Second Prize. £	Third Prize. £
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#### SHIRE.

(Registered or eligible for registration in the Shire Horse Society's Stud Book).

**Entry Fees, including Box: Members, 25/-; Non-Members, 50/- each entry. Entries close March 28, or at double fees, April 4.**

**Judge—T. FORSHAW, Carlton-on-Trent, Newark.**

CLASS									
1.—MARE, in-foal, or with foal at foot	..	..	..	..	10	5	3		
2.—FILLY or COLT, foaled in 1930	..	..	..	..	10	5	3		
3.—FILLY, foaled in 1929	..	..	..	..	10	5	3		
4.—FILLY, foaled in 1928	..	..	..	..	10	5	3		

#### SPECIAL LOCAL PRIZE.

(A) For the best animal exhibited in Classes 1 to 4 by a resident within 25 miles of the Guildhall, Bristol,

10

#### MEDAL.

Offered by the Shire Horse Society.

(B) A Silver Medal (or the sum of £1) for the best Shire Mare, Filly, or Filly Foal, registered or eligible for registration in the Stud Book under the following conditions:—

The winner of the Medal must be a member of the Shire Horse Society at the time of the award.

No animal to be awarded a Silver Medal which has in the same year taken one of the Shire Horse Society's Gold Medals (the Royal and London Shows included).

No animal to be eligible to take more than one Silver Medal during any one year.

If not already registered in the Stud Book, the entry of the winner must be duly lodged with the Shire Horse Society.

A certificate that the Winner is free from hereditary disease, signed by the Local Society's Appointed Veterinary Inspector after his Examination on the Show Ground, must be lodged with the Secretary of the Shire Horse Society, 12, Hanover Square, London, W.1; but Stallions licensed by the Ministry of Agriculture and Fisheries, and Stallions, Mares and Fillies passed at the previous London Show, shall be exempt from further examination when selected for Medals during the current year.

**Breeders' Prizes.** The Shire Horse Society will also give the sum of £1 to the breeder of the winner provided he is a Member of the Shire Horse Society and the dam of the winner is a mare registered in the Stud Book.

#### CHAMPION PRIZE.

(C) "THE CITY OF BATH CHALLENGE VASE."

Presented by the Corporation of Bath (Cedric Chivers, Mayor, 1928), to be held annually and to be held by the winner for the year.

First Prize. £	Second Prize. £	Third Prize. £
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**SUFFOLK.**

(Registered or eligible for registration in the Suffolk Horse Society's Stud Book)

**Entry Fees, including Box : Members, 25/- ; Non-Members, 50/-.** Entries close March 28, or at double fees, April 4.

£10 towards the prizes in these Classes are contributed by the Suffolk Horse Society.

**Judge—Lt.-Col. Sir MERRICK R. BURRELL, Bart., C.B.E.,**  
**Floodgates, Horsham, Sussex.**

**CLASS.**

5.—MARE, in-foal, or with foal at foot .. .. .	10	5	3
6.—GELDING (by a registered sire), foaled in or before 1927..	10	5	3
7.—FILLY, foaled in 1928 or 1929 .. .. .	10	5	3

**PERCHERONS.**

**Entry Fees, including Box : Members, 25/- ; Non-Members, 50/-.**  
Entries close March 28, or at double fees, April 4.

£20 towards the prizes in these Classes are contributed by the British Percheon Horse Society.

**Judge—E. GUY FENWICK, North Luffenham Hall, Stamford.**

8.—MARE, in-foal, or with foal at foot .. .. .	10	5	3
9.—FILLY or COLT, foaled in 1930 .. .. .	10	5	3
10.—FILLY, foaled in 1928 or 1929 .. .. .	10	5	3
11.—GELDING or BARREN MARE (by a registered sire), foaled in or before 1927 .. .. .	10	5	3

**ANY AGRICULTURAL.**

Animals entered in Class 12 must be in the Yard by 9 a.m. on Thursday, May 21, and can leave as soon as they have been judged and paraded.

**Entry Fees : Members, 5/- ; Non-Members, 10/- each entry.**

**12.—Working Cart Mare or Gelding, the bona-fide property of a Yeoman or Tenant Farmer residing within a radius of 25 miles from the Guildhall, Bristol ..** 10      5      3

First Prize £	Second Prize. £	Third Prize £
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### HUNTERS.

**Entry Fees, Classes 13 and 15 to 17, including Box : Members, 25/- ; Non-Members, 50/-. Class 14, Members, 5/- ; Non-Members, 10/- each entry. Entries close March 28, or at double fees, April 4.**

Animals entered in Classes 13 to 17 must be in the Yard before 8 a.m. on Wednesday, May 20, and must remain there till 1 p.m. on Thursday, May 21, when they must be removed from the Yard.

**Judge—E. GUY FENWICK, North Luffenham Hall, Stamford.**

#### CLASS.

13.—MARE, in-foal, or with foal at foot . . . . .	10	5	3
14.—COLT or FILLY FOAL, produce of Mare in Class 13 . . . . .	5	3	1
(NOTE.—In Class 14 Foals must be entered or they cannot compete).			
15.—FILLY, COLT or GELDING, foaled in 1930 . . . . .	10	5	3
16.—FILLY, COLT or GELDING, foaled in 1929 . . . . .	10	5	3
17.—FILLY or GELDING, foaled in 1928 . . . . .	10	5	3

(For Hunter Riding Classes see page 9).

### MEDALS.

**Offered by the Hunters' Improvement and National Light Horse Breeding Society.**

- (D) Gold Medal or Bronze Medal and £5, for the best Hunter Brood Mare, not having previously won the Society's Gold Medal as a Brood Mare during the current year which, if unregistered, must be registered within a month of the award for a number in the Hunter Stud Book, possessing a certificate† of soundness from hereditary disease under the Schedule of Diseases of the Ministry of Agriculture and Fisheries, signed by the Local Society's Appointed Veterinary Inspector (who must be a Member of the Royal College of Veterinary Surgeons) after his examination on the Show Ground.

†NOTE.—All Brood Mares (except those actually holding the Society's Official Veterinary Certificate of Soundness) awarded the Society's Gold Medals in 1927 and subsequently, must comply with this condition as precedent to confirmation. No further Certificates of Exemption will be issued.

No animal which has taken one of the H.I. Society's Medals is eligible to compete for a second Medal in the same year except at the London, Royal and Highland Shows

**FOALING CONDITION.**—The Mare must have her Foal at foot, or must produce a living foal in the current year to a Thoroughbred Horse or Registered Hunter Sire. A certificate of foaling must be produced in the second instance before the award will be confirmed.

**Prize-winners only will be eligible for the Medal: Reserves and lower awards debarred.**

No awards of the Society's Prizes or Medals to a Hunter named and registered in the Hunter Stud Book and subsequently entered by the owner under another name, will be recognised or confirmed unless a re-entry has been previously lodged by the owner for the Hunter Stud Book and the new name registered by the Society.

### (E) PRODUCE GROUP CLASS.

**The Hunters' Improvement and National Light Horse Breeding Society offers Three Premiums of £1 to be awarded to the owners of a Group of Three Young Hunters (not exceeding 3 years old), by the same Thoroughbred or Registered Hunter sire and entered in Classes 15, 16 or 17, provided that not less than Two Groups compete, and that the animals in the selected group are tendered for registration in the Hunter Stud Book. In the case of an animal doubtfully sired, such animal is not eligible to be shown in any Produce Group. If six or more groups compete, the offer will be increased to Three Premiums of £2 each, for the best Group, and Three Premiums of £1 each for the second best Group. The Premiums will be paid direct to the successful exhibitors by the Hunters' Improvement and National Light Horse Breeding Society, on completion of the conditions of offer and similar Premiums will also be paid by the Bath and West Society.**



First Prize. £	Second Prize. £	Third Prize. £
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## ARABS AND PONIES.

Animals entered in Classes 18 to 29 must be in the Yard after 4 p.m. on Thursday, May 21 and before 8 a.m. on Friday, May 22, and must remain in the Yard until 6 p.m. on Saturday, May 23.

Entries Close March 28, or at double fees, April 4.

### ARAB.

Animals entered in Class 18 must be registered or accepted for registration in the Arab Horse Stud Book.  
£25 towards the prizes in this Class are contributed by the Arab Horse Society.

Entry Fee: 10/- each entry

Judge—Lt.-Col. P. D. STEWART, D.S.O., Chadshunt, Kineton, Warwickshire.

18.—COLT, FILLY or GELDING, foaled in 1928, 1929 or 1930 ..	15	12	8
		Fourth	£5

### SILVER MEDALS.

Offered by the Arab Horse Society.

- (F) Best Colt in Class 18.  
(G) Best Filly in Class 18.

### POLO AND RIDING PONY.

Animals entered in Classes 19 to 22 must be entered in the National Pony Stud Book or registered in the approved Mare Register.

Entry Fee: 10/- each entry.

Judge—Major T. J. LONGWORTH, Down Farm, Westonbirt, Tetbury, Glos.

19.—MARE, not exceeding 15 hands, in foal or with foal at foot .. .. .	10	5	3
20.—FILLY, COLT or GELDING, foaled in 1930 .. .. .	10	5	3
21.—FILLY, COLT or GELDING, foaled in 1929 .. .. .	10	5	3
22.—FILLY, COLT or GELDING, foaled in 1928 .. .. .	10	5	3

### MEDALS.

Offered by the National Pony Society.

- (H) Silver Medal for best Brood Mare in Class 19.  
(I) Ditto for best Exhibit in Class 20, 21 or 22.  
(J) Bronze Medal for best Foal.

NOTE.—These Medals will not be awarded unless there are at least three Ponies eligible for it when drawn from more than one Class, or in the case of a single Class, unless there is a minimum of 4 eligible Ponies in that Class.

### SHETLAND PONY.

Entry Fee: 10/- each entry.

Judge—A. SMILES, Monks Green, Fetcham, Leatherhead, Surrey.

23.—MARE, not exceeding 10.2 hands, in foal, or with foal at foot .. .. .	8	4	2
24.—YELD MARE, not exceeding 10.2 hands .. .. .	8	4	2
25.—STALLION, not exceeding 10.2 hands, foaled in or before 1928 .. .. .	8	4	2

### CHAMPION PRIZE.

Offered through the Shetland Pony Society.

- (K) A Silver Cup, value £10, for the best animal exhibited in the Shetland Classes entered or eligible for entry in the Shetland Pony Stud Book. The Cup to be won twice in succession or 3 times in all before becoming the absolute property of the winner.

### WELSH MOUNTAIN.

Entry Fee: 10/- each entry.

Judge—T. E. JENKINS, Kilvrough Park, Park Mill, Swansea.

26.—MARE, not exceeding 12 hands, in foal or with foal at foot .. .. .	8	4	2
27.—STALLION, not exceeding 12 hands .. .. .	8	4	2

### EXMOOR.

Entry Fee: 10/- each entry.

Judge—LORD POLTMOORE, M.F.H., Court Hall, North Molton, Devon.

28.—MARE, 2 years old and over on May 20, not exceeding 12.2 hands, with or without foal at foot. To be led .. .. .	8	4	2
29.—STALLION, 2 years old and over on May 20, not exceeding 12.2 hands .. .. .	8	4	2

First Prize.	Second Prize.	Third Prize
£	£	£

## RIDING CLASSES.

Horses entered in other Classes can, if eligible, be also entered in the Riding Classes on payment of an additional fee of 5/- for Members and 10/- for Non-Members.

## HUNTER.

(For Hunter Breeding Classes, see page 7).

**Entry Fees :** Classes 30 to 34, including Box : Members, 25/- ; Non-Members, 50/-. **Entries close on March 28, or at double fees, April 4.**

Animals entered in Classes 30 to 34 must be in the Yard before 8 a.m. on Wednesday, May 20, and must remain there till 1 p.m. on Thursday, May 21 when they must be removed from the yard, unless entered in other Classes to be judged on a later day.

**Judge—Major V. D. S. WILLIAMS, Green's Norton Court, Towcester.**

## CLASS.

- |   |    |    |   |
|---|----|----|---|
| 30.—MARE or GELDING, foaled before 1928, that has not won a prize of £10 or over under saddle at any Show held previous to April 1, 1931, to carry under 14 stone .. .. . | 10 | 5  | 3 |
| 31.—MARE or GELDING, foaled before 1928, that has not won a prize of £10 or over under saddle at any Show held previous to April 1, 1931, to carry 14 stone and over      | 10 | 5  | 3 |
| 32.—MARE or GELDING, foaled in 1927 .. .. .   | 10 | 5  | 3 |
| 33.—MARE or GELDING, foaled before 1928 and not more than 8 years old, to carry under 14 stone .. .. .  | 20 | 10 | 3 |
| 34.—MARE or GELDING, foaled before 1928 and not more than 8 years old, to carry 14 stone or over .. .. .  | 20 | 10 | 3 |

## MEDAL.

Offered by the Hunters' Improvement and National Light Horse Breeding Society.

- (L) Silver Medal, or the sum of £1, for the best Hunter Mare or Gelding of any age exhibited in the Saddle Classes (the property of a Member of the Hunters' Improvement and National Light Horse Breeding Society), possessing a certificate of soundness from hereditary disease under the Schedule of Diseases of the Ministry of Agriculture and Fisheries, signed by the Local Society's appointed Veterinary Inspector (who must be a member of the Royal College of Veterinary Surgeons) after his examination on the Show Ground.

Prize-winners only will be eligible for the Medal: Reserves and lower awards debarred.

## CONDITIONS FOR MEDAL.

- 1.—The selected Mare (if unregistered) or the selected Gelding (if unentered) must be registered or entered within a month of the award in the Hunter Stud Book.
  - 2.—The owner of the winner must be a member of the Hunters' Improvement and National Light Horse Breeding Society, or a form of application lodged within a month of the award.
  - 3.—No animal may take more than one Medal under this Scheme in the current year, except at the London, Royal and Highland Shows.
- No awards of the Society's Prizes or Medals to a Hunter named and registered in the Hunter Stud Book and subsequently entered by the owner under another name, will be recognised or confirmed unless a re-entry has been previously lodged by the owner for the Hunter Stud Book and the new name registered by the Society.

First Prize.	Second Prize.	Third Prize.
£	£	£

**HACK AND RIDING PONY.****ENTRIES CLOSE.**

*With Box*—March 28, or at double fees, April 4.

*Without Box*—At 12 noon on the day preceding the competition.

**Entry Fees:** With Box, Members, 25/-; Non-Members, 50/- each entry; Without Box: Members, 5/-; Non-Members, 10/-.

**Judges**—Classes 35, 36, 38, 39, 41 and 42—Major V. D. S.

**WILLIAMS, Green's Norton Court, Towcester.**

**Class 37**—Mrs. O. GILBEY, The Slade, Bicester, Oxon.

**Class 40**—Major T. J. LONGWORTH, Down Farm, Westonbirt, Tetbury, Glos.

**Horses entered in Classes 35 to 42 only must be in the Show Yard by 1 p.m. on the day on which they compete, and, with the consent of the Stewards, may leave the Yard as soon as the class has been judged.**

**CLASS.**

35.—(Novice Class). HACK MARE or GELDING, any height, that has not won a prize of over £5 in value as a Hack at any show held previous to April 1, 1931, to be ridden on Thursday, the 2nd day of the Show	10	5	2
36.—HACK MARE or GELDING, any height, to be ridden on Thursday, the 2nd day of the Show	10	5	2
37.—HACK MARE or GELDING, 15 hands and over, to be ridden Side Saddle and judged by a lady on Thursday, the 2nd day of the Show	10	5	2
38.—HACK MARE or GELDING, under 15 hands, to be ridden on Friday, the 3rd day of the Show	10	5	2
39.—Weight-carrying COB, not exceeding 15.1 hands, to carry not less than 14 stone. To be ridden on Friday, the 3rd day of the Show	10	5	2
40.—POLO PONY, not over 15 hands, 4 years old and over, to be ridden on Friday, the 3rd day of the Show, and to be judged by a Polo Pony Judge	10	5	2

**CHILDREN'S PONY.**

**All Entries in these classes must be officially measured before entering the Ring).**

41.—PONY, not over 14 hands, suitable for and to be ridden by a child over 10 and not over 15 years of age last birthday, on Friday, the 3rd day of the Show	5	4	2
	Fourth £1.		

**SPECIAL LOCAL PRIZES.**

<b>For the best exhibits in Class 41, the property of a resident within 25 miles of the Guildhall, Bristol</b>	4	3	1
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*In Judging the Best Riders in Class 41, competitors will have to open and shut a gate and jump a low fence).*

42.—PONY, not over 13 hands, suitable for and to be ridden by a child not over 10 years of age last birthday, on Saturday, the 4th day of the Show	5	4	2
	Fourth £1.		

**Small Silver Cups will be presented to the best Boy and best Girl Riders in these Classes.**

**SILVER MEDAL.**

**Offered by the National Horse Association of Great Britain, 12, Hanover Square, London.**

**For the best Child's Pony in Classes 41 and 42, ridden by a Child under 14 years of age last birthday. No Pony or Rider to take more than one Medal in the same year.**

First Prize. Second Prize. Third Prize. Fourth Prize.

## DRIVING AND JUMPING CLASSES.

Horses entered in other Classes can, if eligible, be also entered in the Driving and Jumping Classes on payment of an additional fee of 5/- for Members and 10/- for Non-Members. A covered shed will be provided for exhibits in the Jumping Classes.

Horses entered in the Driving and Jumping Classes only must be in the Show Yard by 1 p.m. on the day on which they compete, and, with the consent of the Stewards, may leave the Yard as soon as the Class has been judged.

### ENTRIES CLOSE.

*With Box*—March 28, or at double fees, April 4.

*Without Box*—At 12 noon on the day preceding the competition.

**Entry Fees:** With Box, Members, 25/-; Non-Members, 50/- each entry; Without Box: Members, 5/-; Non-Members, 10/-.

### DRIVING.

**Judge**—Classes 45 to 54—A. R. FISH, Holme Mead, Hutton, near Preston, Lancashire.

CLASS.

### TRADESMEN'S CLASSES.

- |  |    |   |     |
|--|----|---|-----|
| 43.—Heavy Cart "Turnout" (Horse, Vehicle and Harness), used solely for business purposes (Farmers excepted), the property of a tradesman residing within a radius of 4 miles from the Guildhall, Bristol, the Horse to have been in regular work three months previous to the date of the Show and to be in constant work up to the day of competition. To be exhibited in the ring on Wednesday, the 1st day of the Show, in the trade cart and harness in which it has been worked for the same period .. .. . | 12 | 6 | 2   |
| 44.—Light "Turnout" ditto ditto .. .. .  | 12 | 6 | 2   |
| 45.—(Novice Class). STALLION, MARE or GELDING, not over 14 hands, that has not previously won a prize of over £5 in value in Single Harness at any show held previous to January 1, 1931, to be driven on Thursday, the 2nd day of the Show .. .. .  | 10 | 5 | 3 2 |
| 46.—(Novice Class). STALLION, MARE or GELDING, over 14 and not over 15 hands, that has not previously won a prize of over £5 in value in Single Harness at any show held previous to January 1, 1931, to be driven on Thursday, the 2nd day of the Show .. .. .  | 10 | 5 | 3 2 |
| 47.—(Novice Class). STALLION, MARE or GELDING over 15 hands that has not previously won a prize of over £5 in value in Single Harness at any Show held previous to January 1, 1931, to be driven on Thursday, the 2nd day of the Show ..   | 10 | 5 | 3 2 |

CLASS.		First	Second	Third	Fourth
		Prize.	Prize.	Prize.	Prize.
		£	£	£	£
<b>DRIVING Continued.</b>					
48.—	Pair of MARES or GELDINGS, any height, to be driven in Double Harness on Friday, the 3rd day of the Show .. .. .	15	7	3	2
49.—	TANDEMS, MARES or GELDINGS, any height, to be driven on Friday, the 3rd day of the Show ..	15	7	3	2
50.—	Mare or Gelding, not exceeding 13.2 hands, the owner residing within a radius of 25 miles from the Guildhall, Bristol. To be driven on Friday, the 3rd day of the Show .. .. .	12	5	3	
51.—	Mare or Gelding, exceeding 13.2 hands, the owner residing within a radius of 25 miles from the Guildhall, Bristol. To be driven on Friday, the 3rd day of the Show .. .. .	12	5	3	
52.—	STALLION, MARE or GELDING, not exceeding 14 hands, to be driven on Saturday, the 4th day of the Show .. .. .	15	7	3	2
53.—	STALLION, MARE or GELDING, over 14 and not exceeding 15 hands, to be driven on Saturday, the 4th day of the Show .. .. .	15	7	3	2
54.—	STALLION, MARE or GELDING, over 15 hands, to be driven on Saturday, the 4th day of the Show..	15	7	3	2

**MEDALS.**

Offered by the Hackney Horse Society under the following conditions :—

(M) A Silver Medal for the best Hackney Mare or Horse exhibited in Single Harness in Classes 45 to 47.

(N) A Silver Medal ditto in Classes 50 to 54.

All Stallions, Mares or Geldings competing for the Medal must be registered in the Stud Book. Each animal must be examined by a qualified Veterinary Surgeon on the Show Ground, unless a good reason to the contrary can be shown, and a certificate of soundness must be supplied. No animal can take more than one of the Silver Harness Medals in any one year.

**JUMPING.**

(UNDER SHOW JUMPING ASSOCIATION RULES).

The Society reserves the right to cancel the Classes for Jumping in the event of sufficient entries not being forthcoming. In such case any Entry Fee paid will be returned.

**Judge—Lt.-Col. LORD WYNFORD, D.S.O., Wynford House,  
Maiden Newton, Dorset.**

55.—	(Novice Class). MARE or GELDING, any height, not having previously won a prize of £5 or over for Jumping at any Show up to the time of Judging that shall jump over the course in the best form on Wednesday, the 1st day of the Show .. .. .	10	7	5	
56.—	MARE or GELDING, any height, that shall jump highest on Wednesday, the 1st day of the Show ..	15	7	5	

First Prize.	Second Prize.	Third Prize.	Fourth Prize.
£	£	£	£

### JUMPING—Continued.

57.—MARE or Gelding, any height, the owner residing within a radius of 25 miles from the Guildhall, Bristol, that shall jump over the course in the best form on Wednesday, the 1st day of the Show .. .. .	12	5	3	
58.—MARE or GELDING, over 15 hands, that shall jump over the course in the best form on Thursday, the 2nd day of the Show .. .. .	15	7	5	2
59.—MARE or GELDING, 15 hands and under, ditto, on Thursday, the 2nd day of the Show .. .. .	15	7	5	2
60.—MARE or Gelding, any height, the owner residing within a radius of 25 miles from the Guildhall, Bristol, that shall jump over the course in the best form on Thursday, the 2nd day of the Show .. .. .	12	5	3	
61.—MARE or GELDING, any height, that shall jump over the course in the best form on Friday, the 3rd day of the Show .. .. .	15	7	5	2
62.—MARE or GELDING, any height, that shall jump highest on Friday, the 3rd day of the Show .. .. .	15	7	5	
All animals in Class 63 must be officially measured before entering the ring.				
63.—Children's Jumping Class.—MARE or GELDING, not exceeding 14 hands, to be ridden by a child not over 15 years of age last birthday, that shall jump over the course in the best form on Friday, the 3rd day of the Show .. .. .	5	4	2	1

### SPECIAL LOCAL PRIZES.

For the best exhibits in Class 63, the property of a resident within 25 miles of the Guildhall, Bristol .. .. .	4	3	1	
64.—MARE or GELDING, over 15 hands, that shall jump over the course in the best form on Saturday, the 4th day of the Show .. .. .	15	7	5	2
65.—MARE or GELDING, 15 hands and under, ditto, on Saturday, the 4th day of the Show .. .. .	15	7	5	2
(In Classes 56 and 62, £1 will be added to the prizes offered for every six inches over 5 feet cleared by the winning animals).				

### CHAMPION CLASS.

66.—MARE or GELDING, any height, having won a Prize in Classes 55 to 65 that shall jump over the course in the best form on Saturday, the 4th day of the Show .. .. .	20	10	5	
(In this Class the whole of the Jumps will be raised at the discretion of the Stewards).				

### CHALLENGE CUP.

- (N) A Challenge Cup value £50, to be won three times before becoming the absolute property of the winner, is offered by a Member of the Society to the winner of the first prize in Class 66.

### SPECIAL PRIZES

Offered by the British Show Jumping Association to Members of that Association who have paid their Subscriptions for the current year.

- (O) A Silver Medal to the owner of the Pony being a prize winner making the least number of faults in Class 63, not having won a first prize value £10 in an Open Class and not having previously won the Medal this year.  
 A Silver Medal to the owner of the Horse making the least number of faults in Class 66, the Horse being a prize winner in the Class and not having previously won the Medal this year.

**NOTICE TO EXHIBITORS OF CATTLE.**

Under the Regulations of the Ministry of Health, animals from Certified Tuberculin Tested Herds can only be exhibited under the following conditions:—

1. In special shedding provided for Certified T.T. cattle.
2. If shown with other animals only after isolation from the herd and re-testing before re-inclusion.

The Society will provide special shedding for such animals at the request of exhibitors.

First Prize.	Second Prize.	Third Prize.
£	£	£

**CATTLE.**

**Entry Fees: Members, 20/-; Non-Members, 40/- each entry.**

**DEVON.**

**Judge—F. J. YENDELL, Upcott, North Molton, Devon.**

**£87 towards the prizes in the Devon Classes and the Champion Prizes are contributed by the Devon Cattle Breeders' Society.**

**CLASS.**

67.—Cow or HEIFER, in-Milk, or in calf, calved in or before 1928	10	5	2
68.—Dairy Cow, in-Milk or in calf, the property of a member of the Devon Cattle Breeders' Society and entered in the Dairy Section of the Herd Book .. .. .	10	5	2
69.—HEIFER, calved in 1929 .. .. .	10	5	2
70.—HEIFER, calved in 1930 .. .. .	10	5	2
71.—BULL, calved in or before 1928 .. .. .	10	5	2
72.—BULL, calved in 1929 .. .. .	10	5	2
73.—BULL, calved in 1930 .. .. .	10	5	2
73A.—DAIRY BULL, calved in 1929 or 1930, entered in the Dairy Section of the Devon Herd Book, Dam and Sire's Dam having yielded a minimum of 6,000lbs. Milk during a Government stipulated year, Volume and page of such entry to be stated when entering ..	10	5	2

**CHAMPION PRIZES.**

Best Cow or Heifer, exhibited in the Devon Classes .. .. .	5
Best Bull ditto .. .. .	5

**SOUTH DEVON.**

**Judge—J. LUSCOMBE, Manor Farm, North Huish, S. Brent, Devon.**

74.—Cow, calved before 1928, in-calf or having had a full-time calf on or after Jan. 1, 1931 .. .. .	10	5	2
75.—HEIFER, calved in 1929 .. .. .	10	5	2
76.—HEIFER, calved in 1930 .. .. .	10	5	2
77.—BULL, calved before 1930 .. .. .	10	5	2
78.—BULL, calved in 1930 .. .. .	10	5	2

**CHAMPION PRIZES.**

**Offered by the S. Devon Herd Book Society.**

Best Cow or Heifer exhibited in the S. Devon Classes .. .. .	£4 4s.
Best Bull ditto .. .. .	£4 4s.

**DAIRY SOUTH DEVON.**

**Judge—F. W. CROOK, Dartington Barton, Totnes.**

79.—DAIRY Cow, any age .. .. .	10	5	2
80.—HEIFER, in-milk or in-calf, calved in 1928 .. .. .	10	5	2
81.—HEIFER, calved in or after 1929 .. .. .	10	5	2

# Prizes for Cattle for 1931.

CLXXXV

## SHORTHORN.

**Judge—M. CONACHER, The Royal Farms, Windsor.**

	First Prize £	Second Prize. £	Third Prize. £
82.—COW or HEIFER, in-Milk, calved in or before 1928 .. .. .	10	5	2
83.—HEIFER, calved in 1929 .. .. .	10	5	2
84.—HEIFER, calved in 1930 .. .. .	10	5	2
85.—BULL, calved before 1929 .. .. .	10	5	2
86.—BULL, calved in 1929 .. .. .	10	5	2
87.—BULL, calved in 1930 .. .. .	10	5	2

## CHAMPION PRIZE.

Offered by the Shorthorn Society.

**Best Bull in the Shorthorn Classes entered in or eligible for entry in Coates's Herd Book, with Silver Medal to the Breeder .. .. .** 10

## DAIRY SHORTHORN.

**Judge—R. HOBBS, Kelmscott, Lechlade, Glos.**

The First Prizes in Classes 89 and 91 (and a Silver Medal to the Breeder of the winners) are offered by the Shorthorn Society and the First Prize in Class 93 by the Dairy Shorthorn Association.

Animals entered in Classes 88 and 90 can also be entered in Classes 89 and 91 on payment of an additional entry fee of 10/- for Members and £1 for non-Members.

88.—PEDIGREE COW, in-milk, calved in or before 1927 .. .. .	10	5	2
89.—PEDIGREE COW, in-Milk, calved in or before 1927, eligible for, and entered in Coates's Herd Book, or pedigree accepted for such entry previous to the Show, and not having previously won a similar prize offered by the Shorthorn Society in 1931, to be milked in the Ring before judging, under Conditions 54 .. .. .	10	5	2
90.—PEDIGREE HEIFER, in-milk, calved in or after 1928 .. .. .	10	5	2
91.—PEDIGREE HEIFER, calved in or after 1928, eligible for and entered in Coates's Herd Book, or Pedigree accepted for such entry previous to the Show, and not having previously won a similar prize offered by the Shorthorn Society in 1931, to be milked in the Ring before Judging, under Conditions 54 .. .. .	10	5	2
92.—PEDIGREE BULL, calved before 1930 .. .. .	10	5	2
93.—PEDIGREE BULL, calved in 1930, entered or pedigree provisionally accepted for entry in Coates's Herd Book and registered or provisionally accepted for registration in the Year Book of the Dairy Shorthorn Association, and entries must be accompanied by a certificate signed by the Secretary of the Association to this effect. (An animal having taken one of these prizes is not eligible to compete again the same year except at the R.A.S.E. Show). The Prizes will not be awarded in this Class unless there are at least 5 entries and 3 exhibitors .. .. .	10	5	2

## SPECIAL PRIZE.

Offered by the Dairy Shorthorn Association

**Best Bull in Class 93, registered or provisionally accepted for registration in the Year Book of the Dairy Shorthorn Association and qualified in accordance with conditions No. 55 .. .. .** 10



First Prize.	Second Prize	Third Prize.
£	£	£

**HEREFORD.****Judge—C. H. MORRIS, Weston Court, Pembridge, Herefordshire.****CLASS**

94.—Cow, in-milk, calved before Sept. 1, 1928 .. .. .	10	5	2
95.—HEIFER, calved on or between Sept. 1, 1928, and Aug. 31, 1929 .. .. .	10	5	2
96.—HEIFER, calved on or after September 1, 1929 .. .. .	10	5	2
97.—BULL, calved before September 1, 1928 .. .. .	10	5	2
98.—BULL, calved on or between Sept. 1, 1928, and Aug. 31, 1929 .. .. .	10	5	2
99.—BULL, calved on or after September 1, 1929 .. .. .	10	5	2

**CHAMPION PRIZES.**

Offered by the Hereford Herd Book Society.

Best registered Cow or Heifer in the Hereford Classes .. .. .	10
Best registered Bull in ditto — .. .. .	10

**SUSSEX.****Judge—A. DAY, Great Tong, Headcorn, Kent.**

100.—Cow or HEIFER, in-Milk, calved before 1929 .. .. .	10	5	2
101.—HEIFER, calved in 1929 or 1930 .. .. .	10	5	2
102.—BULL, any age .. .. .	10	5	2

**SILVER MEDALS.**

Offered by the Sussex Herd Book Society.

Best Cow or Heifer in the Sussex Classes registered or tendered for entry in the Herd Book.
Best Bull in Ditto, ditto.

**GLOUCESTERSHIRE.**

£10 towards the prizes in these Classes are contributed by the Gloucestershire Cattle Society.

**Judge—A. JONES, Bowcott Farm, Wotton-under-Edge.**

103.—Cow or HEIFER, in-milk or calf, calved before Jan. 1, 1929 .. .. .	10	5	2
104.—HEIFER, calved on or after Jan. 1, 1929 .. .. .	10	5	2
105.—BULL, any age .. .. .	10	5	2

**BRITISH FRIESIAN.****Judge—A. WEIGHTMAN, Middle Herrington Dairy Farm, Sunderland.**

One fourth of the Prize Money awarded and the Silver Medals in these Classes are offered by the British Friesian Cattle Society, and animals entered must be registered in the B.F.C.S. Herd Book proper, those registered in Supplementary Section not being eligible.

106.—Cow or HEIFER, any age, in-Milk .. .. .	10	5	2
107.—HEIFER, not in Milk, calved in 1929 .. .. .	10	5	2
108.—HEIFER, calved in 1930 .. .. .	10	5	2
109.—BULL, calved before 1930 .. .. .	10	5	2
110.—BULL, calved in 1930 .. .. .	10	5	2

**SILVER MEDALS.**

Best Cow or Heifer in the British Friesian Classes.
Best Bull in ditto.

# Prizes for Cattle for 1931.

cxxxvii

First Prize. £	Second Prize. £	Third Prize. £
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## ABERDEEN-ANGUS.

Judge—G. F. BARRON, Summers Hall, Wethersfield, Braintree, Essex.

£10 towards the Prizes in the Aberdeen-Angus Classes are contributed by the English Aberdeen-Angus Cattle Association.

111.—Cow or HEIFER, in-Milk, calved before 1st December, 1928	10	5	2
112.—HEIFER, calved on or between 1st December, 1928 and 30th November, 1929 .. .. .	10	5	2
113.—HEIFER, calved on or after 1st December, 1929 .. .. .	10	5	2
114.—BULL, calved before 1st December, 1929 .. .. .	10	5	2
115.—BULL, calved on or after 1st December, 1929 .. .. .	10	5	2

## CHAMPION PRIZES.

Offered by the Aberdeen-Angus Cattle Society.

A Silver Medal for the best Animal in the Aberdeen-Angus Classes.

Offered by the English Aberdeen-Angus Cattle Association.

A Silver Medal for the best Animal of opposite sex to that of the Champion

A Silver Medal for the best Exhibit bred in England or Wales

## RED POLL.

Judge—J. E. QUESTED, The Firs, Cheriton, Kent.

£20 towards the Prizes in the Red Poll Classes and the Silver Medals are contributed by the Red Poll Cattle Society.

116.—Cow or HEIFER, in-Milk, calved before 1929 .. .. .	10	5	2
117.—HEIFER, calved in 1929 .. .. .	10	5	2
118.—HEIFER, calved in 1930 .. .. .	10	5	2
119.—BULL, calved in or before 1929 .. .. .	10	5	2
120.—BULL, calved in 1930 .. .. .	10	5	2

## SILVER MEDALS.

Best Cow or Heifer in the Red Poll Classes.

Best Bull in ditto.

## AYRSHIRE.

Judge—R. DICKIE, Knockenjig, Kirkconnel, N.B.

£20 towards the Prizes in the Ayrshire Classes and the Gold Medal are contributed by the English Committee of the Ayrshire Cattle Herd Book Society, and animals entered must be registered or eligible for registration in the Society's Herd Book.

121.—Cow, in-Milk, calved before September 1, 1927 .. .. .	10	5	2
122.—HEIFER, in-Milk, calved on or after September 1, 1927 .. .. .	10	5	2
123.—HEIFER, calved on or after September 1, 1929 .. .. .	10	5	2
124.—BULL, calved on or after September 1, 1929 .. .. .	10	5	2

## GOLD MEDAL.

Best animal in the Ayrshire Classes.

## BLUE ALBION.

£17 towards the prizes in these Classes are offered by the Blue Albion Cattle Society.

Judge—T. H. CALDERBANK, The Hall, Stow St. Mary, Chelmsford, Essex.

125.—Cow or HEIFER, in-milk, calved in or before 1928 .. .. .	10	5	2
126.—HEIFER, calved in 1929 or 1930 .. .. .	10	5	2
127.—BULL, any age .. .. .	10	5	2

## JERSEY.

Judge—

£10 towards the Prizes in the Jersey Classes are contributed by the English Jersey Cattle Society.

128.—Cow, in-Milk, calved before 1928 .. .. .	10	5	2
129.—Cow or HEIFER, in-Milk, calved in 1928 .. .. .	10	5	2
130.—HEIFER, in-Milk, calved in or since 1929 .. .. .	10	5	2
131.—HEIFER, calved in 1930 .. .. .	10	5	2
132.—BULL, calved before 1929 .. .. .	10	5	2
133.—BULL, calved in 1929 .. .. .	10	5	2
134.—BULL, calved in 1930 .. .. .	10	5	2

## CHALLENGE CUP.

Offered through the English Jersey Cattle Society by Mr. H. L. Popham. The Hunstrete Perpetual Silver Challenge Cup for the best Cow or Heifer entered or eligible for entry in the E. J. Herd Book exhibited in the Jersey Classes by a Member of the E.J.C. Society.

First Prize. £	Second Prize. £	Third Prize. £
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### GUERNSEY.

Judge—H. H. LAITY, Bosistow, Porthcurnow, Cornwall.

£20 towards the Prizes in the Guernsey Classes are contributed by the English Guernsey Cattle Society.

#### CLASS.

135.—Cow, in-Milk, calved before 1928 .. .. .	10	5	2
136.—HEIFER, in-Milk, calved in 1928 .. .. .	10	5	2
137.—HEIFER, calved in 1929 .. .. .	10	5	2
138.—HEIFER, calved in 1930 .. .. .	10	5	2
139.—BULL, calved before 1929 .. .. .	10	5	2
140.—BULL, calved in 1929 .. .. .	10	5	2
141.—BULL, calved in 1930 .. .. .	10	5	2

### DEXTER.

Judge—G. T. BARHAM, Sudbury Park, Wembley, Middlesex.

142.—Cow or HEIFER, of any age, in-Milk, calved before 1929 .. .. .	10	5	2
143.—HEIFER, not in-Milk, calved in 1929 or 1930 .. .. .	10	5	2
144.—BULL, any age .. .. .	10	5	2

#### SPECIAL PRIZE.

Offered by the Dexter Cattle Society.

The Devonshire Challenge Cup, for the best Animal in the Dexter Classes bred by the Exhibitor, and entered in or eligible for the Dexter Herd Book. The Cup to be won by the same Exhibitor with different animals three years in succession before becoming his absolute property.

The Certificate of Award of the Dexter Cattle Society will be given to the owner of the winning animal on each occasion the Cup is competed for.

*Animals entered in the Breed Classes can, if eligible, be entered also, on payment of an additional fee of 10/- for Members and 20/- for Non-Members, in the Milk and Butter Test Classes.*

### MILK TEST.

(See Regulation 57).

Judge—A. F. SOMERVILLE, Dinder House, Wells, Somerset.

145.—Cow, in-Milk, of the Jersey, Guernsey, Kerry or Dexter breed, yielding the largest quantity of milk (at 2 or 3 Milkings under Conditions 57) showing not less than 3% Butter Fat <u>on the average of the combined milkings</u> .. .. .	10	5	2
146.—Cow, in-Milk, of any other breed or cross, ditto, ditto .. .. .	10	5	2

#### CHAMPION PRIZE.

For the animal giving the best results in Classes 145 and 146 £5

#### CHALLENGE CUP.

Offered by the Dexter Cattle Society.

The "Bertodano" Challenge Cup for the Dexter Cow obtaining the greatest number of points in the Milk Test Classes

#### SPECIAL PRIZES.

Offered by the South Devon Herd Book Society.

For the South Devon Cow awarded the greatest number of points in Class 146 £4 4  
For the Ayrshire Cow obtaining the greatest number of points in Class 146 £5

Offered by the British Friesian Cattle Society, under its conditions. To the owner of the Cow awarded the greatest number of points in Class 146, provided that such Cow is a British Friesian .. £25

The British Friesian Cattle Society's sliding scale grants will be made to its Members in respect to British Friesian Cows competing and qualifying for such grants.

# Prizes for Butter Test, Dairy Cattle and Sheep for 1931. cxxxix

First Prize.	Second Prize.	Third Prize.
£	£	£

## BUTTER TEST.

(See Regulation 57).

Judge—A. F. SOMERVILLE, Dinder House, Wells, Somerset.

CLASS.

147.—Cow, of any breed or cross, obtaining the greatest number of points by the practical test of the separator and churn .. .. .

10	5	2
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## SPECIAL PRIZES.

Offered by the respective Breed Societies.

For the three Jersey Cows obtaining the best results and not less than 42 points .. .. .

Gold Medal or £10, Silver and Bronze Medals.

Certificates of Merit will also be awarded to Jersey Cows 4 years old and under obtaining 30 points, and Cows over 4 years old obtaining 35 points. In the event of Cows obtaining the same number of points, the Prize to be awarded to the Cow that has been the longest time in milk.

For the Guernsey Cow obtaining the best results — —

25

## DAIRY.

Animals entered in Classes 148 and 149 must be in the Yard before 9 a.m. on Thursday, May 21, and can leave after being judged and paraded.

Entry Fee: Members, 10/-; Non-Members, 20/- each entry.

148.—Dairy Cow, in-Milk or to calve within 2 months from the date of the Show, from a herd of not exceeding 15 Dairy Cows, the property of a bona-fide Yeoman or Tenant Farmer residing in the county of Somerset, Gloucester or Wiltshire, and farming not more than 50 acres .. .. .

10	5	2
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149. Dairy Cow, in-Milk or to calve within 2 months from the date of the Show, from a herd of over 15 and under 30 Dairy Cows, the property of a Yeoman or Tenant Farmer residing in the county of Somerset, Gloucester or Wiltshire, and farming not more than 100 acres .. .. .

15	7	3
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## SHEEP.

Entry Fees: Members, 17/6; Non-Members, 35/- each entry.

## DEVON LONGWOOLLED.

Judge—E. LAWRENCE, Verryards, Cullompton, Devon.

150.—Shearling RAM .. .. . 10 5 2

151.—Pen of 3 Shearling EWES .. .. . 10 5 2

152.—Pen of 3 EWE LAMBS, dropped in 1931 .. .. . 10 5 2

## DEVON CLOSE WOOL.

£10 towards the prizes in these Classes are offered by the Devon Close Wool Sheep Society.

Judge—D. N. PURCHASE, Great Hele Barton, South Molton.

153.—Shearling RAM .. .. . 10 5 2

154.—Pen of 3 Shearling EWES .. .. . 10 5 2

155.—Pen of 3 EWE LAMBS, dropped in 1931 .. .. . 10 5 2

## SOUTHDOWN.

Judge—H. E. CRAWFORD, The Home Farm, Nonington, Dover.

156.—Shearling RAM .. .. . 10 5 2

157.—Pen of 3 RAM LAMBS, dropped in 1931 .. .. . 10 5 2

158.—Pen of 3 SHEARLING EWES .. .. . 10 5 2

First Prize. £	Second Prize. £	Third Prize. £
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**HAMPSHIRE DOWN.****Judge—W. H. DEAN, Place Farm, Tisbury, Wilts.****£25 towards the Prizes in these Classes and the Champion Prize are offered by the Hampshire Down Sheep Breeders' Association.**

CLASS.

159.—Shearling RAM .. .. .	10	5	2
160.—RAM LAMB, dropped in 1931 .. .. .	10	5	2
161.—Pen of 3 RAM LAMBS, dropped in 1931 .. .. .	10	5	2
162.—Pen of 3 Shearling EWES .. .. .	10	5	2
163.—Pen of 3 EWE LAMBS, dropped in 1931 .. .. .	10	5	2

**CHAMPION PRIZE.****Best Ram, Ram Lamb or Pen in the Hampshire Down Classes .. 5****OXFORD DOWN.****Judge—W. TREVETHAN, Broadstone Hill Farm, Chipping Norton, Oxon.**

164.—Shearling RAM .. .. .	10	5	2
165.—Pen of 3 RAM LAMBS, dropped in 1931 .. .. .	10	5	2
166.—Pen of 3 Shearling EWES .. .. .	10	5	2

**£10 towards the prizes in Class 167 are offered by the Oxford Down Sheep Breeders' Association, and they will be withheld until the winning Animals are registered in the Flock Book.**

167.—Pen of 3 EWE LAMBS, dropped in 1931 .. .. .	10	5	2
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**DORSET HORN.****Judge—T. H. MERSON, Farrington, North Petherton, Bridgwater.****The Animals entered in Class 169 must have been shorn bare in the year of the Show.****£15 towards the Prizes in these Classes are contributed by the Dorset Horn Sheep Breeders' Association.**

168.—Pen of 3 RAM LAMBS, dropped after October 1st, 1930 ..	10	5	2
169.—Pen of 3 Shearling EWES .. .. .	10	5	2
170.—Pen of 3 EWE LAMBS, dropped after October 1, 1930 ..	10	5	2

**DORSET DOWN.****Judge—R. H. SNOW, All Hallows, St. Giles, Salisbury.****£15 towards the Prizes in these Classes are contributed by the Dorset Down Sheep Breeders' Association.**

171.—Shearling RAM .. .. .	10	5	2
172.—Pen of 3 RAM LAMBS, dropped in 1931 .. .. .	10	5	2
173.—Pen of 3 Shearling EWES .. .. .	10	5	2

**EXMOOR HORN.****Judge—W. G. THORNE, Higherhouse, Twitchin, South Molton, Devon.****£17 towards the Prizes in these Classes are contributed by the Exmoor Horn Sheep Breeders' Society; and animals must be shown in their wool.**

174.—RAM, 2 Shear and upwards .. .. .	10	5	2
175.—Shearling RAM .. .. .	10	5	2
176.—Pen of 3 RAM LAMBS, dropped in 1931 .. .. .	10	5	2
177.—Pen of 3 Shearling EWES .. .. .	10	5	2

**SUFFOLK.****Judge—L. LANE, Moulton Manor, Newmarket.****£10 towards the Prizes in these Classes are contributed by the Suffolk Sheep Society.**

178.—Shearling RAM .. .. .	10	5	2
179.—Pen of 3 RAM LAMBS, dropped in 1931 .. .. .	10	5	2
183.—Pen of 3 SHEARLING EWES .. .. .	10	5	2

First Prize	Second Prize. £	Third Prize. £
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**RYELAND.****Judge—W. REES PROSSER, Cefn Brynich, Brecon.**

£10 of the Prizes in these Classes and the Champion Prize are contributed by the Ryeland Sheep Society.

181.—Shearling RAM .. .. .	10	5	2
182.—Pen of 3 RAM LAMBS, dropped in 1931 .. .. .	10	5	2
183.—Pen of 3 Shearling EWES .. .. .	10	5	2
184.—Pen of 3 EWE LAMBS, dropped in 1931 .. .. .	10	5	2

**CHAMPION PRIZE.**

A Silver Medal for the best Ram or Pen in the Ryeland Classes.

**DARTMOOR.****Judge—S. HEGGADON, Mister View, Yelverton, S. Devon.**

£10 towards the Prizes in these Classes are contributed by the Dartmoor Sheep Breeders' and Flock Book Association, and animals must be shown in Wool.

185.—Shearling RAM .. .. .	10	5	2
186.—Pen of 3 RAM LAMBS, dropped in 1931 .. .. .	10	5	2
187.—Pen of 3 Shearling EWES .. .. .	10	5	2
188.—Pen of 3 EWE LAMBS, dropped in 1931 .. .. .	10	5	2

**KERRY HILL.****Judge—C. H. HOBBS, Aber Tanat, Llanyblodwel, Salop.**

£10 towards the Prizes in these Classes are contributed by the Kerry Hill (Wales) Flock Book Society, and animals must be shown uncoloured. The names and Flock Book number of Rams must be given.

189.—RAM, 2 Shear and upwards .. .. .	10	5	2
190.—Shearling RAM .. .. .	10	5	2
191.—Pen of 3 Shearling EWES .. .. .	10	5	2
192.—Pen of 3 EWE LAMBS, dropped in 1931 .. .. .	10	5	2

**GOATS.**

(For Regulations see Entry Forms).

**Entry Fees: Members, 7/6; Non-Members, 10/- each entry.****Judge—T. W. PALMER, 10, Lloyd's Avenue, London, E.C.3.**

£10 towards the Prizes in these Classes are contributed through the British Goat Society.

193.—FEMALE GOAT, in-Milk, any age, British Alpine, Toggenburg, British Toggenburg, Saanen or British Saanen .. .. .	2 10	1 10	15 0
194.—FEMALE GOAT, in-Milk, any age, Any other Variety .. .. .	2 10	1 10	15 0
195.—GOATLING, any variety, over one but not exceeding two years .. .. .	2 10	1 10	15 0
196.—FEMALE KID, any variety, not exceeding one year .. .. .	2 10	1 10	15 0
197.—MILKING COMPETITION for QUALITY (Butter Fat only), quantity and time (two milkings) .. .. .	2 10	1 10	15 0
198.—MILKING COMPETITION for QUANTITY AND TIME ONLY (three milkings) .. .. .	2 10	1 10	15 0

Special Prizes offered by the British Goat Society.

**A Challenge Certificate for the Best Female Goat over two years that has borne a kid.****A Challenge Certificate for the Best Dual Purpose Goat over two years that has borne a kid.****A Bronze Medal for the Best Female Exhibit.****The Dewar Challenge Trophy** for the Goat over two years, other than an Anglo-Nubian, gaining the highest number of points in the Milking Competition.

The Prizes awarded at this Show will also be included in the awards for the British Goat Society's "Breeders' " Perpetual Challenge Cup &amp; "Stud Goat " Challenge Cup.

**Note.**—To compete for the Dual Purpose Challenge Certificate, a Goat must be exhibited in one of the first two Inspection Classes, and also in the Quality Milking Competition

First Prize. £	Second Prize £	Third Prize. £
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## PIGS.

**Entry Fees:** Members, 17/6; Non-Members, 35/- each entry.

(For Special Condition as to Classes for Pigs farrowed in 1931 see Regulation 11).

### BERKSHIRE.

**Judge—E. PALMER, Highclere, Peppard, Henley-on-Thames.**

25 towards the Prizes in these Classes and the Two Silver Cups are contributed by the National Pig Breeders' Association, and ages are calculated to May 20, 1931.

#### CLASS.

199.—BOAR, exceeding 18 months old .. .. .	8	5	2
200.—BOAR, not exceeding 18 months old .. .. .	7	4	2
201.—BREEDING Sow, exceeding 18 months old .. .. .	8	5	2
202.—BREEDING Sow, not exceeding 18 months old .. .. .	7	4	2

#### SILVER CUPS.

To be won twice in succession or three times in all before becoming the property of the Exhibitor.

**Best Boar in the Berkshire Classes.**

**Best Sow in ditto.**

**A Silver Medal will be awarded to the Breeder of the prize-winning Animals.**

### LARGE BLACK.

**Judge—J. WARNE, Tregonhayne Manor, Tregoney, Grampond Road, Cornwall.**

112 towards the Prizes in these Classes and the Silver Medals are contributed by the Large Black Pig Society.

203.—BOAR, farrowed before May 1, 1930 .. .. .	8	5	2
204.—BOAR, not exceeding 12 months old on May 1, 1931 .. .. .	7	4	2
205.—BOAR, farrowed in 1931 .. .. .	7	4	2
206.—BREEDING Sow, farrowed before May 1, 1930 .. .. .	8	5	2
207.—BREEDING Sow, not exceeding 12 months old on May 1, 1931 .. .. .	7	4	2
208.—BREEDING Sow, farrowed in 1931 .. .. .	7	4	2

#### SILVER MEDALS.

**Best Boar in the Large Black Classes.**

**Best Sow in ditto.**

### LARGE WHITE.

**Judge—F. WEBB, Bullington Estate Office, Leighton Buzzard.**

23 towards the Prizes in these Classes and the Champion Prizes are offered by the National Pig Breeders' Association.

209.—BOAR, farrowed before July 1, 1930 .. .. .	8	5	2
210.—BOAR, farrowed on or after July 1, 1930 .. .. .	7	4	2
211.—BREEDING Sow, farrowed before 1930 .. .. .	8	5	2
212.—BREEDING Sow, farrowed on or after January 1 and before July 1, 1930 .. .. .	7	4	2
213.—BREEDING Sow, farrowed after July 1, 1930 .. .. .	7	4	2

#### CHAMPION PRIZES.

**SILVER GILT MEDALS** value £2 10s. each (or cash) for the best Boar and the best Sow in the Large White Classes.

First Prize. £	Second Prize. £	Third Prize. £
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### MIDDLE WHITE.

**Judge—A. LENEY, Little Haven, Dibden Purlieu, Hythe, Southampton.**

£8 towards the Prizes in these Classes and the Champion Prizes are offered by the National Pig Breeders' Association.

#### CLASS

214.—BOAR, farrowed before July 1, 1930 .. .. .	8	5	2
215.—BOAR, farrowed on or after July 1, 1930 .. .. .	7	4	2
216.—BREEDING SOW, farrowed before 1930 .. .. .	8	5	2
217.—BREEDING SOW, farrowed on or after January 1, and before July 1, 1930 .. .. .	7	4	2
218.—BREEDING SOW, farrowed after July 1, 1930 .. .. .	7	4	2

### CHAMPION PRIZES.

SILVER GILT MEDALS value £2 10s. each (or cash) for the best Boar and the best Sow in the Middle White Classes.

### TAMWORTH.

**Judge—F. WEBB, Billington Estate Office, Leighton Buzzard.**

219.—BOAR, any age .. .. .	7	4	2
220.—BREEDING SOW, farrowed in or before 1931 .. .. .	7	4	2

### CHAMPION PRIZE.

Offered by the National Pig Breeders' Association.

A BRONZE MEDAL for the best Animal in the Tamworth Classes.

### GLOUCESTERSHIRE OLD SPOTS.

**Judge—J. F. WRIGHT, Olton Farm, Solihull, Warwick.**

£16 towards the Prizes in these Classes are contributed by the Gloucestershire Old Spots Pig Society.

221.—BOAR, farrowed before July 1, 1930 .. .. .	10	5	2
222.—BOAR, farrowed on or after July 1, 1930 .. .. .	7	4	2
223.—BREEDING SOW, farrowed before 1930 .. .. .	10	5	2
224.—BREEDING SOW, farrowed in 1930 .. .. .	7	4	2
225.—Pair of BREEDING SOWS, farrowed in 1931 .. .. .	7	4	2

### CHAMPION PRIZES.

Offered through the Gloucestershire Old Spots Pig Society.

The Sir George Watson Challenge Cup, value £21, for the best Animal in the Gloucestershire Old Spots Classes. (The Cup to be won three times by the same Exhibitor with different Animals before becoming his own property).

Offered by Messrs. Bennett and Howard.

The Sir John Anderson Cup for the best Sow in the Gloucestershire Old Spots Classes. (The Cup to be won three times by the same Exhibitor before becoming his own property).



First Prize.	Second Prize.	Third Prize.
£ s.	£ s.	£ s.

### WESSEX SADDLEBACK.

Judge—R. J. W. DAWSON, Estate Office, Temple Dinsley,  
Hitchin, Herts.

£8 towards the Prizes in these Classes and the Silver Medals are offered by the National Pig Breeders' Association, and all Pigs exhibited must be entered or eligible for entry in the Herd Book.

#### CLASS.

226.—BOAR, farrowed before July 1, 1930 .. .. .	8	5	2
227.—BOAR, farrowed on or after July 1, 1930 .. .. .	7	4	2
228.—BREEDING SOW, farrowed before 1930 .. .. .	8	5	2
229.—BREEDING SOW, farrowed in 1930 .. .. .	7	4	2
230.—BREEDING SOW, farrowed in 1931 .. .. .	7	4	2

SILVER GILT MEDALS (value £2 10s. each).

For the best Boar and the best Sow exhibited in the Wessex Saddleback Classes.

### NATIONAL LONG WHITE LOP-EARED.

Judge—M. H. MOORE, The Hellyers, Ipplepen, Newton Abbot,  
Devon.

£5 towards the Prizes in these Classes and the Silver Medals are contributed by the National Long White Lop-Eared Pig Society and all Pigs exhibited must have been registered previous to entry and the Stud number given on entry form.

231.—BOAR, farrowed before July 1, 1930 .. .. .	8	5	2
232.—BOAR, farrowed on or after July 1, 1930 .. .. .	7	4	2
233.—BREEDING SOW, farrowed before 1930 .. .. .	8	5	2
234.—BREEDING SOW, farrowed in 1930 .. .. .	7	4	2
235.—BREEDING SOW, farrowed in 1931 .. .. .	7	4	2

#### SILVER MEDALS.

For the best Exhibit in Classes 231 or 232.

For the best Exhibit in Classes 233 to 235.

#### CHAMPION PRIZE.

Offered by The Right Hon. The Lord Mildmay of Flete.

A SILVER CUP for the best Pig exhibited in Classes 231 to 235. (The Cup to be won twice by the same exhibitor before becoming his absolute property.)

### BACON PIGS AND PORKERS.

Judge—R. P. REDMAN, c/o C. and T. Harris (Calne) Ltd.,  
Calne, Wilts.

236.—Pair of Pigs of any breed or first cross of two pure breeds (the cross to be stated) between 9 score 10lbs. and 11 score 10lbs. live weight each, best suitable for the Wiltshire cut of Bacon, the age of the Pigs to be given and animals to be weighed before Judging	5	3	2
All Pigs in Class 236 will be purchased at the current market price by Messrs. Spear Bros. and Clark (Ld.), Bristol and Bath, who will remove them from the Show, kill, and cure the carcasses. Additional prizes will then be awarded for the best Bacon after curing			
237.—3 PURE BRED PIGS or first cross of 2 pure breeds (the cross to be stated) most suitable for Pork, between 90 and 105 lbs. live weight, the age of the Pigs to be given and animals to be weighed before Judging	5	3	2
All Pigs in Class 237 will be purchased at the current market price by Mr. G. H. Webb, of 16, Lawrence Hill, Bristol, who will remove them from the Show and kill them. Additional prizes will then be awarded for the best Pork			
	5	3	2

First Prize £	Second Prize. £	Third Prize. £
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**PRODUCE.****CIDER.**

(Open to Growers and Makers for Cider made from the juice of apples grown in Great Britain).

**Entry Fees:** Members, 3/6; Non-Members, 6/- each entry.

**Judge—O. GROVE, The Cider Institute, Long Ashton, Bristol.**

*Cider can be entered in as many Classes as it is eligible for on payment of the entry fee for each Class.*

**CLASS.**

238.—NOVICE CLASS. Cask of CIDER made in 1930 by an Exhibitor who has not previously taken a first prize in any public exhibition .. .. .	5	3	2
239.—Cask of CIDER made in 1930 by an exhibitor whose main occupation is farming .. .. .	5	3	2
240.—Cask of CIDER, made in 1930, of a specific gravity not exceeding 1.015 at 60 deg. Fahr. .. .. .	5	3	2
241.—6 Quart Bottles of CIDER, made in 1930, ditto .. .. .	5	3	2
242.—Cask of CIDER, made in 1930 .. .. .	5	3	2
243.—6 Quart Bottles of CIDER, made in 1930 .. .. .	5	3	2
244.—6 Quart Bottles of CIDER, made in any year previous to 1930 .. .. .	5	2	2

Offered by the Somerset County Agricultural Education Committee.

245.—6 Quart Bottles of Cider, made in 1930 by a Student who has received instruction in cider making provided by the Somerset County Council .. .. .	3	2	1
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**CHEESE.**

*(These Classes are not open to Professional Teachers.)*

**Entry Fees:** Class 246, Members, 10/-; Non-Members, 20/-. Classes 247 to 250, Members, 7/6; Non-Members, 15/-. Class 251, 5/-.

**Judge—G. W. SYMONDS, Market Street, Wells, Somerset.**

246.—Three CHEDDAR CHEESES (not less than 56lbs. each) made in 1930 .. .. .	15	10	5
247.—Three CHEDDAR CHEESES (not over 56lb. each), made in 1930 by an exhibitor who has not previously taken a prize at the Bath and West Show .. .. .	5	3	2
248.—Three CHEDDAR CHEESES (not over 56lbs. each), made in 1930 .. .. .	10	7	4
249.—Four LOAF or other TRUCKLE CHEDDAR CHEESES, made in 1930 .. .. .	5	3	2
250.—Three CAERPHILLY CHEESES, made in 1931 .. .. .	5	3	2

Offered by the Somerset County Agricultural Education Committee.

251.—Two Cheddar Cheeses (over 50lb. each) made in 1930 by a Student who has received instruction in cheese making provided by the Somerset County Council .. .. .	5	3	2
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cxlvi *Prizes for Cream Cheese, Butter and Cream and  
Butter-making for 1931.*

	First Prize. £ s.	Second Prize. £ s.	Third Prize. £ s.	Fourth Prize. £ s.
<b>CREAM CHEESE, BUTTER AND CREAM.</b>				
<b>Entry Fees :</b> Classes 252 to 256, Members, 3/6 ; Non-Members, 6/-. Class 257, 2/6.				
<b>Judge—Miss BRAY, 1, Richmond Road, Exeter.</b>				
<i>(These Classes are not open to Professional Teachers.)</i>				
<b>CLASS.</b>				
252.—Three Cream CHEESES .. .. .	3	0	2	0
253.—2lbs. of Fresh (or very slightly salted) BUTTER .. .. .	4	0	3	0
254.—2lbs. of BUTTER, in the making of which no salt has been used, to be judged on the last day of the Show .. .. .	4	0	3	0
255.—12lbs. of Keeping BUTTER, in a jar or crock, to be delivered to the Secretary 4 weeks before the Show .. .. .	5	0	4	0
256.—Four half-pounds of SCALDED CREAM .. .. .	3	0	2	0
257.—Collection of FARM PRODUCE from a Holding not exceeding 50 acres, including 1lb. Butter, 1lb. Clotted Cream, and 1 Dozen Eggs (the exhibits in this Class must be sent by post) .. .. .	2	0	1	0

## COMPETITIONS.

### BUTTER-MAKING.

*(No Winner of a first prize given by this Society for Butter-making during the last 3 years is eligible to compete in Classes 258 or 259).*

**Entry Fees :** Members, 3/6 ; Non-Members, 6/-.

**Judges—**

**Classes 258 to 260—Miss A. J. W. NICHOLAS,**  
**County Hall, Truro.**

**Class 261—A. TODD, British Dairy Institute, The**  
**University, Reading.**

*(For Conditions and Regulations see Entry Form.).*

- |   |   |   |   |   |   |    |   |   |
|---|---|---|---|---|---|----|---|---|
| 258.—For Competitors who have not previously won a prize for Butter-making at the London Dairy, the Royal or Bath and West Shows. On the 1st day of the Show .. .. .  | 4 | 0 | 3 | 0 | 1 | 10 | 1 | 0 |
| 259.—For Students who have been through a course of instruction in Butter-making at any County Council School, and who have not previously won a first or second prize for Buttermaking at the London Dairy, Royal or Bath and West Shows. On the 2nd day of the Show .. .. . | 4 | 0 | 3 | 0 | 1 | 10 | 1 | 0 |
| 260.—For Men and Women. On the 3rd day of the Show .. .. .  | 4 | 0 | 3 | 0 | 1 | 10 | 1 | 0 |
| 261.—For Winners of First and Second Prizes in the Butter-making Classes 258 to 260, or at any previous meeting of the Society. On the 4th day of the Show  |   |   |   |   |   |    |   |   |
| 1st Prize, Gold Medal.  |   |   |   |   |   |    |   |   |
| 2nd „ Silver Medal.   |   |   |   |   |   |    |   |   |
| 3rd „ Bronze Medal.   |   |   |   |   |   |    |   |   |

# Prizes for Junket Making, Shoeing, and Milk Recorded cxlvii and Dairy and Pig Herds for 1931.

First Prize.	Second Prize.	Third Prize.	Fourth Prize.
£ s.	£ s. d.	s. d.	s. d.

## JUNKET MAKING.

Entry Fee : 2/6.

Judge—Miss A. J. W. NICHOLAS, County Hall, Truro.

262.—The Best Junket made from 1 quart of milk.  
On the 3rd day of the Show .. .. 2 0 1 0 0 10

## SHOEING.

Entry Fees : Members, 3/6 ; Non-Members, 6/- each  
entry.

Judge—J. C. MORRIS, F.W.C.F., 115, St. Vincent Street,  
Ladywood, Birmingham.

Special Novice Prizes of £3, £2 and £1 will be offered in Classes 263 and 264  
to men who have never previously won a prize of the value of £2  
and over.

263.—FOR AGRICULTURAL HORSE SHOEING by Smiths.	£	s.	£	s.	£	s.	£	s.
On the 2nd day of the Show .. ..	4	0	3	0	2	0	1	0
Novice prizes .. ..	3	0	2	0	1	0		
264.—FOR HUNTER SHOEING by Smiths. On the 3rd								
day of the Show .. ..	4	0	3	0	2	0	1	0
Novice prizes .. ..	3	0	2	0	1	0		
265.—FOR SHOEMAKING or TURNING by Smiths. On								
the 4th day of the Show .. ..	4	0	3	0	2	0	1	0

## SILVER MEDAL.

Offered by the National Horse Association of Great Britain.  
For the Competitor gaining the most marks for the best Flitted Shoe in  
Classes 263 and 264. In case of close competition the marks  
allowed for the preparation of the foot to be taken into consideration.

## CHAMPION PRIZES.

"The Capewell Challenge Cup," offered by the Capewell Horse Nail Co.  
(Ltd.) for the best Competitor in Class 263. The Cup to be won  
3 years in succession or 4 times in all before becoming the absolute  
property of the winner.

Gold Medal offered by Messrs. Godwin, Warren and Co., Ltd., Bristol,  
for the Best Competitor in Class 264.

An All-Bright "Godwin" Shoe Turning Hammer, by Messrs. Godwin,  
Warren and Co., for the Best Competitor in Class 265.

## MILK RECORDED AND DAIRY AND PIG HERDS.

Offered by the Bristol Local Committee and open only to residents in the  
Counties of Somerset, Gloucester and Wilts.  
(For Conditions and Regulations see Entry Forms).

Judges—W. H. HITCH, Mordiford, London Road, Charlton  
Kings, Cheltenham.

W. NIXON, Great Pinley, Claverdon, Warwick.

1.—MILK RECORDED HERD containing 15 or over full-time recorded cows .. ..	30	20	10
2.—MILK RECORDED HERD, containing under 15 full-time recorded cows .. ..	20	15	5
3.—HERD of not less than 30 DAIRY Cows, the property of a bona-fide Farmer .. ..	30	20	10
4.—HERD of not less than 8 or more than 30 DAIRY Cows, the property of a bona-fide Farmer .. ..	20	15	5
5.—UTILITY HERD (not necessarily Pedigree) of 25 Pigs or over, comprising not less than 3 Breeding Sows and not less than two-thirds of the Herd to have been bred by the exhibitor .. ..	15	10	5

## SMALL HOLDINGS.

(For Conditions and Regulations see Entry Forms).  
Offered by the Somerset County Agricultural Education Committee.

## ALLOTMENTS.

(For Particulars see Entry Forms).  
Offered by the Bristol Local Committee.

**POULTRY.**

(Under Poultry Club Rules).

**The Poultry Show will open on Thursday, May 21.**

**Entry Fees:** Class 1, Members, 3/-; Non-Members, 5/-;  
Classes 2 to 73, Members, 2/-; Non-Members, 3/-;  
each entry.

**Judges**—R. F. HEARNshaw, Fox Hill, Burton Joyce,  
Nottingham (Classes 1 to 27, 48 to 53, and 56 to 61),  
and H. S. ANTHONY, Home Farm, Euxton, Chorley  
(Classes 1, 28 to 47, 54 to 55, and 62 to 73).

*The Birds in Classes 1 to 45 and 56 to 67 must have been hatched  
previous to January 1st, 1931.*

**CLASS.**

	First Prize.	Second Prize.	Third Prize
	£ s.	£ s.	£ s.
1.—Any Distinct Breed.—Cock and 2 Hens, the property of one Exhibitor .. .. .	3 0	2 0	1 0
2.—PLYMOUTH ROCK (Barred)—Cock .. .. .	1 10	1 0	0 10
3.—Ditto—Hen .. .. .	1 10	1 0	0 10
4.—Ditto (Any other variety)—Cock .. .. .	1 10	1 0	0 10
5.—Ditto—Hen .. .. .	1 10	1 0	0 10
6.—ORPINGTON—(Any variety)—Cock .. .. .	1 10	1 0	0 10
7.—Ditto—Hen .. .. .	1 10	1 0	0 10
8.—BARNVELDER—Cock .. .. .	1 10	1 0	0 10
9.—Ditto—Hen .. .. .	1 10	1 0	0 10
10.—RHODE ISLAND RED—Cock .. .. .	1 10	1 0	0 10
11.—Ditto—Hen .. .. .	1 10	1 0	0 10
12.—SUSSEX (Light)—Cock .. .. .	1 10	1 0	0 10
13.—Ditto—Hen .. .. .	1 10	1 0	0 10
14.—SUSSEX (Speckled)—Cock .. .. .	1 10	1 0	0 10
15.—Ditto—Hen .. .. .	1 10	1 0	0 10
16.—SUSSEX (Any other variety)—Cock .. .. .	1 10	1 0	0 10
17.—Ditto—Hen .. .. .	1 10	1 0	0 10
18.—DORKING (Any variety)—Cock .. .. .	1 10	1 0	0 10
19.—Ditto—Hen .. .. .	1 10	1 0	0 10
20.—LANGSHAN—Cock or Hen .. .. .	1 10	1 0	0 10
21.—WYANDOTTE (White)—Cock .. .. .	1 10	1 0	0 10
22.—Ditto—Hen .. .. .	1 10	1 0	0 10
23.—Ditto (Columbian)—Cock .. .. .	1 10	1 0	0 10
24.—Ditto—Hen .. .. .	1 10	1 0	0 10
25.—Ditto (Any other variety)—Cock or Hen .. .. .	1 10	1 0	0 10
26.—WELSUMMER—Cock .. .. .	1 10	1 0	0 10
27.—Ditto—Hen .. .. .	1 10	1 0	0 10
28.—INDIAN GAME—Cock .. .. .	1 10	1 0	0 10
29.—Ditto—Hen .. .. .	1 10	1 0	0 10
30.—FRENCH (including Faverolles)—Cock .. .. .	1 10	1 0	0 10
31.—Ditto—Hen .. .. .	1 10	1 0	0 10
32.—MINORCA—Cock .. .. .	1 10	1 0	0 10
33.—Ditto—Hen .. .. .	1 10	1 0	0 10
34.—LEGHORN (Any colour)—Cock .. .. .	1 10	1 0	0 10
35.—Ditto—Hen .. .. .	1 10	1 0	0 10
36.—HAMBURG (Any variety)—Cock or Hen .. .. .	1 10	1 0	0 10
37.—CAMPINE—Cock or Hen .. .. .	1 10	1 0	0 10
38.—OLD ENGLISH GAME (Black Red)—Cock .. .. .	1 10	1 0	0 10
39.—Ditto (Wheaton or Partridge)—Hen .. .. .	1 10	1 0	0 10
40.—Ditto (Any other colour)—Cock .. .. .	1 10	1 0	0 10
41.—Ditto—Hen .. .. .	1 10	1 0	0 10
42.—ANCONA—Cock .. .. .	1 10	1 0	0 10
43.—Ditto—Hen .. .. .	1 10	1 0	0 10
44.—ANY OTHER DISTINCT BREED not previously men- tioned (excluding Bantams)—Cock .. .. .	1 10	1 0	0 10
45.—Ditto—Hen .. .. .	1 10	1 0	0 10

	First Prize. £ s.	Second Prize. £ s.	Third Prize. £ s.
<b>SELLING CLASSES.</b>			
46.—ANY DISTINCT BREED—Cock or Cockerel (Price not to exceed £1 1s.) .. .. .	1 10	1 6	0 10
47.—ANY DISTINCT BREED—Hen or Pullet (Price not to exceed £1 1s.) .. .. .	1 10	1 0	0 10

**CHICKENS OF 1931.**

## CLASS

48.—SUSSEX (Any variety)—Cockerel .. .. .	1 10	1 0	0 10
49.—Ditto—Pullet .. .. .	1 10	1 0	0 10
50.—WYANDOTTE (Any variety)—Cockerel .. .. .	1 10	1 0	0 10
51.—Ditto—Pullet .. .. .	1 10	1 0	0 10
52.—ANY OTHER VARIETY, Soft Feather—Cockerel .. .. .	1 10	1 0	0 10
53.—Ditto—Pullet .. .. .	1 10	1 0	0 10
54.—ANY OTHER VARIETY, Hard Feather—Cockerel .. .. .	1 10	1 0	0 10
55.—Ditto—Pullet .. .. .	1 10	1 0	0 10

**UTILITY POULTRY.**

56.—WYANDOTTE—Cock .. .. .	1 10	1 0	0 10
57.—Ditto—Hen .. .. .	1 10	1 0	0 10
58.—SUSSEX—Cock .. .. .	1 10	1 0	0 10
59.—Ditto—Hen .. .. .	1 10	1 0	0 10
60.—RHODE ISLAND RED—Cock .. .. .	1 10	1 0	0 10
61.—Ditto—Hen .. .. .	1 10	1 0	0 10
62.—LEGHORN—Cock .. .. .	1 10	1 0	0 10
63.—Ditto—Hen .. .. .	1 10	1 0	0 10
64.—ANY OTHER VARIETY, Light Breed—Cock .. .. .	1 10	1 0	0 10
65.—Ditto—Hen .. .. .	1 10	1 0	0 10
66.—ANY OTHER VARIETY, Heavy Breed—Cock .. .. .	1 10	1 0	0 10
67.—Ditto—Hen .. .. .	1 10	1 0	0 10

**SPECIAL PRIZES.**

The Columbian Wyandotte Club (Hon. Sec., J. Dickinson, Brissenden, Staplehurst, Kent), offers the following Special Prizes:—

“The Goddard Visiting Cup” for best Columbian Wyandotte exhibited.

“The Twist Novice Points Cup” and the “West Hill Novice Points Cup” (Points credited by Club Secretary).”

The Welsummer Club (Hon. Sec., Mrs. A. M. Pape, Shrewton House, Shrewton, Wilts) offer a Special for the best Welsummer exhibited.

**CHAMPION PRIZES.**

Best Cock or Cockerel exhibited in any of the Classes ..	3
Best Hen or Pullet exhibited in any of the Classes ..	3

**DUCKS, GEESE AND TURKEYS.**

68.—DRAKE or DUCK (Aylesbury) .. .. .	1 10	1 0	0 10
69.—“ ” (Rouen) .. .. .	1 10	1 0	0 10
70.—“ ” (Indian Runner) .. .. .	1 10	1 0	0 10
71.—“ ” (Any other variety) .. .. .	1 10	1 0	0 10
72.—GANDER or GOOSE .. .. .	1 10	1 0	0 10
73.—TURKEY—Cock or Hen .. .. .	1 10	1 0	0 10

First Prize.	Second Prize.	Third Prize.
£ s.	£ s.	£ s.

**PIGEONS.**

(Under N.P.A. Show Rules).

**Entry Fees:** Members, 1/6; Non-Members, 2/- each entry.**Judge—A. JUPE, 105, Lordship Lane, London, S.E.****CLASS.**

74.—POUTER, PIGMY or CROPPER—Cock or Hen .. ..	1	0	0	10	0	5
75.—DRAGOON—Cock or Hen .. ..	1	0	0	10	0	5
76.—MAGPIE (Black)—Cock or Hen .. ..	1	0	0	10	0	5
77.—Ditto (Any other colour)—Cock or Hen .. ..	1	0	0	10	0	5
78.—TUMBLER (Long-faced)—Cock or Hen .. ..	1	0	0	10	0	5
79.—JACOBIN (Any colour)—Cock or Hen .. ..	1	0	0	10	0	5
80.—MODENA—Cock or Hen .. ..	1	0	0	10	0	5
81.—FANTAIL (Any colour)—Cock or Hen .. ..	1	0	0	10	0	5
82.—EXHIBITION HOMER—Cock or Hen .. ..	1	0	0	10	0	5
83.—WORKING HOMER (Adult)—Cock .. ..	1	0	0	10	0	5
84.—Ditto—Hen .. ..	1	0	0	10	0	5
85.—Ditto (1931)—Cock .. ..	1	0	0	10	0	5
86.—Ditto—Hen .. ..	1	0	0	10	0	5
87.—ANY OTHER VARIETY—Cock .. ..	1	0	0	10	0	5
88.—Ditto—Hen .. ..	1	0	0	10	0	5
89.—SELLING CLASS (Any variety, not to exceed £2)— Cock or Hen .. ..	1	0	0	10	0	5
90.—Ditto (Any variety, not to exceed £1)—Cock or Hen .. ..	1	0	0	10	0	5

**CHAMPION PRIZE.****Best Pigeon exhibited in any of the Classes .. .. 2****RABBITS.****Entry Fees:** Members, 1/6; Non-Members, 2/- each entry.**Judge—F. B. ROBERTS, 32, Windmill Road, Croydon, Surrey.**

1.—ENGLISH (Any colour), 5 months old and over ..	1	0	0	10	0	5
2.—Ditto (Any colour), under 5 months old ..	1	0	0	10	0	5
3.—SILVER—Any age .. ..	1	0	0	10	0	5
4.—DUTCH (Any colour), 5 months old and over ..	1	0	0	10	0	5
5.—Ditto (Any colour), under 5 months ..	1	0	0	10	0	5
6.—CHINCHILLA—Buck, any age .. ..	1	0	0	10	0	5
7.—Ditto—Doe, any age .. ..	1	0	0	10	0	5
8.—ARGENTE (Any colour), any age .. ..	1	0	0	10	0	5
9.—BEVERAN (Any colour), any age .. ..	1	0	0	10	0	5
10.—FLEMISH GIANT, any age .. ..	1	0	0	10	0	5
11.—SABLE, any age .. ..	1	0	0	10	0	5
12.—HAVANA, any age .. ..	1	0	0	10	0	5
13.—TAN, any age .. ..	1	0	0	10	0	5
14.—LILAC, any age .. ..	1	0	0	10	0	5
15.—ANGORA, 5 months old and over .. ..	1	0	0	10	0	5
16.—Ditto, under 5 months .. ..	1	0	0	10	0	5
17.—ANY OTHER VARIETY, 5 months old and over ..	1	0	0	10	0	5
18.—Ditto, under 5 months .. ..	1	0	0	10	0	5
19.—SELLING CLASS (Any variety), price not to exceed £1 ..	1	0	0	10	0	5

**CHAMPION PRIZE.****Best Rabbit exhibited in any of the Classes .. .. 2**

## CONDITIONS AND REGULATIONS FOR LIVE STOCK.

### GENERAL.

#### ENTRIES.

1. The following are the Fees payable for Stock entries made on or before March 28. After that date and up to April 4 entries (except in the Riding, Driving and Jumping Classes) will only be received on payment, in each case, of double the fee named below. *Exhibitors are requested to note that no exception can be made to this.* The entry fee is not returnable to an Exhibitor who enters an Animal in a Class for which it is ineligible, or for entries that are withdrawn after the date of entry has expired.

	MEMBERS.	NON-MEMBERS.
	(See Reg. 4 below)	
Horses (Classes 1 to 11, 13, 15 to 17, and 30 to 34) for each Entry, including Horse Box .. .. .	25s.	50s.
Ditto (Classes 12 and 14) without box .. .. .	5s.	10s.
Arabs and Ponies (Classes 18 to 20) including Box, for each Entry ..	10s.	10s.
Hacks, Riding Ponies, Driving and Jumping (Classes 35 to 66) without Box .. .. .	5s.	10s.
Ditto, with Box (entries close March 28) .. .. .	25s.	50s.
Cattle (Classes 67 to 147) .. .. .	20s.	40s.
Cattle (Classes 148 and 149) .. .. .	10s.	20s.
Nurse Cows .. .. .	40s.	40s.
Sheep (Classes 150 to 192) .. .. .	17s. 6d.	35s.
Goats (Classes 193 to 198) .. .. .	7s. 6d.	10s.
Pigs (Classes 199 to 237) .. .. .	17s. 6d.	35s.

For particulars as to fees in other Classes, see Prize List and Entry forms.

2. Animals entered in the Riding, Driving and Jumping Classes, and not having a box in the Yard, must be in the Yard by the time stated on the day on which they compete, and, with the consent of the Stewards may leave the Yard as soon as they have been judged. Entries in these Classes, if no Box is required, must reach the Secretary not later than 12 noon on the day previous to the competition for which the animal is entered. If a Box is required the entry must reach the Secretary on or before March 28, or at double fees as stated above, by April 4.

3. No Entry will be received unless the fee accompanies it, and (if the Exhibitor is a Member of the Society) the subscription for the year, unless previously paid, together with any arrears that may be due.

4. The privilege of entering at Members' fees is strictly limited to members of the Society elected on or before January 31, 1931, and subscribing not less than £1 annually; or if elected after that date who has paid his subscription for 1931 and an additional £1 to the Society before the date of the closing of entries.

5. Where a Prize is offered for a *pair or pen* of Animals, single entry fees only are payable for each *pen or pair*, and only one entry form must be used.

6. Exhibitors desiring to send a nurse cow with their exhibits must give notice at the time of making their entry and pay the entry fee as above stated.



7. All Entries must be made on the printed forms to be obtained of the Secretary (F. H. Storr, 3, Pierrepont Street, Bath), and, in applying for Forms, Exhibitors are requested to state how many entries they wish to make of either Horses, Cattle, Sheep, Goats or Pigs, as a separate entry form must be filled up for each animal entered.

8. Every Exhibitor or Competitor is requested to examine carefully the list of Prizes and Conditions, as he will be held responsible for the correctness of his Certificate of Entry. An Exhibitor omitting to give information asked for on the entry form, with regard to the age, breeder, name, colour, sire, dam, etc., of an animal, will be liable to have his entry disqualified, and, if an Exhibitor desires that his animal shall compete for any special prize offered, he must notify this on the entry form where requested to do so.

9. If an Exhibitor or Competitor fails, when called upon by the Stewards or Council, to prove the correctness of his Certificate of Entry to their satisfaction, the Entry may be disqualified and any award made to it cancelled.

10. An Exhibitor who has made, in due time, an entry of Horses, Cattle, Sheep, Goats or Pigs, in a particular class, will be permitted, up to Thursday, April 16, to withdraw the entry of such animal, and to substitute for it the entry of another animal in the same class, on payment of the difference, if any, between the amount of the entry fee originally paid for the animal withdrawn, and the post entry fee. When, after entry, an animal dies, the Exhibitor will be permitted to substitute another entry for it, in the same class, without payment of any further fee, upon affording evidence of death and furnishing particulars of the substituted entry in time for the alteration to be made in the published catalogue.

11. In the Classes for Pigs farrowed in 1931, full particulars of the animals to be exhibited will be received up till Thursday, April 16, provided the entry has been made at the proper time.

12. An animal can be entered in as many Classes as it is eligible for on payment of an additional fee in each Class. No additional fee is, however, payable in the case of Special or Champion Prizes for exhibits already entered in any particular Class.

13. Every exhibit must be the *bona fide* property of the Exhibitor both at the time of entry and on the first day of the Exhibition. For the purposes of this Meeting, H.M. Officers' chargers will be considered as the property of the Officer in Classes 55 to 66.

#### SHOW YARD.

14. The Yard will be open for the reception of Shire, Suffolk and Percheron Horses, Hunters (see Regulation 2 for Haicks, Riding Ponies, Driving and Jumping Horses), Cattle, Sheep, Goats and Pigs, on Sunday, Monday and Tuesday, May 17, 18 and 19. Horses will also be received from 6 to 8 o'clock on the morning of the first day of Show, but all other Stock Entries (except Any Agricultural Horses, Arabs and Ponies, which must be in the Yard before the time stated on Thursday, May 21 and Friday, May 22) must be in the Yard by 6 p.m. on May 19. A label denoting the number of each entry will be sent by the Secretary, and must be securely affixed to the head of the Animal. Exhibitors desiring to send their animals to the Show Yard more than 2 days before the opening of the Show are requested to notify the Secretary previously. The carriage of exhibits must in all cases be paid by the Exhibitor. No exhibit subject to charges will be received by Officers of the Society.

15. No animal can be removed from its place in the Yard without the special permission of the Stewards.

16. If any animal is brought into the Show Yard without having been entered for exhibition, the owner shall be liable to a fine of £2 and to the forfeiture of any prize awarded to him or her.

17. During the time the Show is open to the public no rug or cloth shall be hung up so as to conceal any animal in a horse-box or stall, except with the special permission of the Steward of the department. All sheets used for the purpose must be removed by 9 a.m. each morning, and must not be replaced until after the closing hour of the Show each day.

18. All Exhibits and all persons in charge of the same, will be subject to the Orders, Regulations, and Rules of the Society, and the Stewards shall have the power to remove from the Yard the Stock or property belonging to, and to cancel the admission ticket of, any Exhibitor who shall infringe any of the Regulations or Conditions of the Meeting, or who shall refuse to comply with any instructions given by the Stewards, without any responsibility attaching to the Stewards or the Society in consequence of such removal.

19. No animal shall be decorated with colours other than the Society's Prize Rosettes.

20. No person will be allowed to fix any placard, or to take down any placard in the Yard, without the permission of the Stewards.

21. All persons in charge of Exhibits will be subject to the orders of the Stewards, and will be required to parade or exhibit the animals in their charge at such times as may be directed by the Stewards. Servants must be in attendance each day during the Show at least a quarter of an hour before the time appointed for exhibiting the animals under their charge in the Show rings. Servants in charge of animals must see that the animals' boxes or stalls are kept clean. Stockmen are required to clear their sheds of manure by 6 a.m. each day. No oil or cooking stove of any description must be lighted in the Horse Boxes, and any one found offending in this respect will be dealt with in accordance with Regulation 33. Owners of animals exhibited will be held responsible for the behaviour of their Servants, and for the consequences of any misconduct of such Servants.

22. Servants in charge of Stock at night must, if they leave the Yard, return before 10 p.m., or they will not be admitted.

23. On the day previous to the opening, and on each day of the Show, hay or green food and straw will be supplied by the Society free of expense to exhibitors at the Forage Stores in the Show Yard. Servants must apply at the Forage Stores for their Forage Tickets after they have brought their animals into the Yard. Corn, meal, and cake can be obtained in the Show Yard at fixed prices.

**NOTE.**—For the convenience of Exhibitors wishing to sell their animals, a Register will be kept at the Secretary's Office, in which they may enter the prices.

#### **TICKETS.**

24. Each Exhibitor of Live Stock whose entry fees amount to £1 and upwards will have a free Ticket of admission to the Show Yard sent to him, except in the case of a Member, who will receive his Member's Badge in lieu of an Exhibitor's Ticket. Tickets for the use of Servants in charge of Live Stock remaining in the Yard will also be sent, and the Exhibitor will be held responsible for the proper use of such Tickets. In the case of animals not having a box in the Yard, a Servant's Ticket will not be required, as the official label will admit the Driver or Rider, Horse and Vehicle into the Yard. In case of transfer or other improper use of a Ticket the Exhibitor will be required to pay a fine of £1 for each case. Exhibitors will be held responsible for the attendance at each Parade of as many Servants as Tickets have been issued for.

**RESPONSIBILITY.**

25. Neither the Society nor any of its Officers or Servants shall be in any way responsible or accountable for anything that may happen (from any cause or circumstances whatever) to Exhibitors or their Servants, or to any animal or article exhibited, or property brought into the Show Yard, or otherwise for anything else in connection with, or arising out of, or attributable to, the Society's Show, or these or any other Conditions or Regulations prescribed by the Society in relation thereto.

26. Each Exhibitor shall be solely responsible for any consequential or other loss, injury, or damage done to, or occasioned, by, or arising from, any animal or article exhibited by him, and shall indemnify the Society against all legal or other proceedings in regard thereto.

27. The Society, its Officers and Servants, will not be liable for any errors or mistakes that may happen in placing or penning the Stock or Articles to be exhibited, but the Servants in charge of the same must see that they are placed or penned according to their entries.

**DISQUALIFICATION.**

28. The use of resin, soap, sawdust above the knee, or other substances designed to give an artificial appearance; cording; or other improper means adopted in showing an animal in the Agricultural Horse Classes will be regarded as a disqualification.

29. An animal in the Breeding Classes having any unsoundness likely to be transmitted to its progeny shall be disqualified thereby from receiving any Prize offered by or through the Society.

30. If it shall be proved to the satisfaction of the Stewards or Council that an Exhibitor or Competitor has knowingly signed an incorrect Certificate, or knowingly given an incorrect Pedigree of any animal, or has attempted to enter an animal or other exhibit or to obtain a Prize by any other unfair means at this or any other Agricultural Society's Meetings, or is under exclusion from any Breed Society for fraudulent practices, the Council shall have the power to cancel all awards made to such Exhibitor or Competitor, to disqualify him or her from exhibiting or competing at future Meetings of the Society, and to inform other Agricultural Associations of their action in this respect.

**PENALTIES.**

31. As the non-exhibition of animals entered for the Show causes unnecessary preparations and expense, and disarranges the Show Yard, any person entering Stock, and failing to exhibit the same, shall pay a penalty of 10s. for each entry, unless a Certificate, under the hand of the Exhibitor or his authorised agent, be lodged with the Secretary of the Society, before the day of Exhibition, certifying that such non-exhibition is caused either by—(1) the death of the animal or animals; or (2) contagious or infectious disease (confirmed by the explanatory certificate of a Veterinary Surgeon), or other sufficient cause; or (3) by its becoming ineligible for the Class in which it has been entered. The fine is not remitted in the case of an Exhibitor selling an animal between the time of entry and the date of the Show.

32. Every Exhibitor will be required to undertake to forfeit and pay to the Society the sum of £20, as and for liquidated damages, if any animal which he exhibits be, to his knowledge, suffering from any contagious or infectious disease, and the Stewards are empowered to prevent the entry of any diseased animal into the Yard, or to have it removed therefrom.

33. Any infringement of any of these or any other prescribed Regulations or Conditions will subject the Exhibitor to a fine of £1 by the Stewards, and to the forfeiture, by order of the Council, of any Prize to which he may be entitled (in addition to all other consequences attaching to such infringement). The Council reserves to itself the right to inform other Agricultural Associations of any decision it may come to with respect to an Exhibitor.

#### AWARDS.

34. No Second Prize will be awarded unless there are 3 Entries and no Third Prize unless there are 5 Entries in the Class, except on the special recommendation of the Judge. In the event of the number of different Exhibitors throughout the section of any Breed being less than three, the classification for that Breed shall be automatically cancelled for the year, and the Entry Fees returned. The Society reserves to itself the right to withhold any prize, if, in the opinion of the Stewards, the conditions and regulations have not been properly complied with, or if, in the opinion of the Judge, there is insufficient merit.

35. Only the signed awards of the Judges are accepted by the Society as evidence that a prize has been awarded, and the production of the prize card or the rosette by an Exhibitor will not entitle him to the prize.

36. The certificate of the Veterinary Inspector, whether as to age or soundness, shall be required only in cases where the Judges are in doubt, or where the Stewards may consider it necessary. (See also Regulations 46 and 66 with reference to Horses and Pigs). The decision of the Inspector in such cases shall be final and conclusive; and in case it shall be against the animal to which a Prize has been awarded, such animal shall be disqualified from receiving such Prize.

#### PROTESTS.

37. Any Exhibitor wishing to lodge a protest having reference to Live Stock exhibited at this Meeting must make the same in writing on a form to be obtained from the Secretary, and deposit with him the sum of £3. If, on investigation, the protest is not sustained to the satisfaction of the Stewards, the sum thus deposited, shall, at the discretion of the Council, be forfeited to the funds of the Society. All protests (except in the Riding, Driving or Jumping Classes) must be delivered at the Secretary's Office in the Show Yard on the day on which the award is made, and no protest will be subsequently received, unless a reason, satisfactory to the Stewards, be assigned for the delay. Any protest against an award in the Riding, Driving or Jumping Classes must be made to the Steward in the ring immediately after the judging of the class to which it refers, and a deposit of £3 must, at the same time, be handed to the Steward. The Stewards will consider such protests at 11 o'clock on the following day at the Secretary's Office, at which time and place any person making a protest must attend or be represented by his authorised agent. The decision of the Stewards shall be final.

#### APPLYING TO CERTAIN CLASSES ONLY.

##### HORSES.

38. Horses can be removed from the Yard at night on deposit by the Exhibitor of £3 at the Finance Office, which sum will be forfeited if the Horse does not return at 8 a.m. each day during the Exhibition. This Regulation does not apply to Animals not having a box in the Yard entered in the Riding, Driving and Jumping Classes only.

39. Exhibitors must provide saddles for Horses in Classes 30 to 42 and 55 to 66, as they are to be ridden; and vehicles and harness for those in Classes 43 to 54 which are to be driven.

40. No Horse, unless a Foal, will be admitted into the Ring without a proper bit.
41. Except in the Moorland and Mountain Pony Classes the Prizes for Stallions foaled before 1929 will be withheld until a certificate from the owner is delivered to the Secretary that the Horse has served at least 10 Mares during the current season.
42. All Foals must be the offspring of the Mares with which they are exhibited, and the name of the sire of the Foal must be stated on the certificate of entry.
43. Mares entered as in Foal shall, except as otherwise stated hereafter, be certified to have produced a living Foal before August 1 of the year of the Show. If the required Certificate, which must be on a form obtainable from the Secretary, is not received by September 30, 1931, the prize awarded will be forfeited.
44. Horses may, at the discretion of the Stewards, be measured, and the measurement shall be taken in the shoes worn by the entry at the time of judging, and these shoes shall not be removed to allow of the entry being shown in another class. Animals entered in the Children's Riding and Jumping Classes must be officially measured before entering the ring.
45. In the Driving Classes for Hackneys exceeding 14 hands (except yearling colts and fillies), no shoe (nails included) may exceed 2lbs. in weight, and for Ponies not exceeding 14 hands, yearling colts and yearling fillies, no shoe (nails included) may exceed 1½lbs. in weight.
46. All Animals shown in hand shall be examined by the Society's Veterinary Inspector, and unless pronounced free from indications of hereditary disease shall be ineligible to receive the prize. Brood Mares, Foals and Yearlings will not be examined for their wind. The owner of an Animal rejected under this Regulation may, upon his application in writing to the Secretary, be furnished with a copy of the Veterinary Certificate. This Regulation shall not, however, apply to any animal holding a Ministry of Agriculture Certificate for the current year, which must accompany the animal and be available for inspection by officers of the Society.
47. The Jumping Competitions will be carried out in accordance with, and judged under the rules of, the Show Jumping Association. The jumps may consist of a single hurdle, gate, double hurdle, open ditch, bank, wall, and water, at the discretion of the Judge and Stewards. Each horse competing shall have its catalogue number affixed in such a way as to be easily seen by the general public.

#### CATTLE.

48. All cattle must be properly secured to the satisfaction of the Officers of the Society on being brought to the gate of the Yard, or they will not be admitted. All Bulls must have a ring or clamp attached to the nose and, in the aged Classes, must be provided with a strong chain, and be led with a proper stick.
49. All cattle will be required to be paraded in the ring at least once a day at the discretion of the Stewards.
50. No Bull calved before January 1, 1929, or in the Aberdeen-Angus Classes before December 1, 1928, will be eligible to receive a Prize until certified to have served not less than six different cows (or Heifers) previous to June 1st, 1931, and to be the sire of live calves dropped in the year 1931, or in the Aberdeen-Angus Classes after December 1st, 1930. No Cow or Heifer, entered as in-milk, will be eligible to receive a Prize unless certified to have had a living Calf within the fifteen months preceding the date of the Show, or that the Calf, if dead, was born at the proper time.

51. Every Cow or Heifer in-milk shall be milked dry in the Show Yard before 7.30 p.m. on the evening preceding the day of judging, in the presence of an officer of the Society appointed for the purpose.

52. Any animal in the Cattle Classes found to be artificially coloured will be disqualified.

53. The milk yielded by Cows in the Show Yard must not be sold at the stalls, but will be purchased by the Society for the purpose of the Dairy at a price to be agreed upon, and will be paid for on delivery at the Milk Receiving Office in the Dairy.

54. The following conditions apply only to the prizes offered for Pedigree Dairy Shorthorn Milking Cows and Heifers :— The Cows and Heifers entered will be clean milked out at 6 o'clock on the evening preceding the opening of the Show to the satisfaction of the Stewards, and will be again milked in the ring on the first morning of the Show in the presence of the Judge, who shall see the Milk weighed. No animal being 4 years and 3 calendar months of age and upwards on the first day of the Show shall be eligible to compete unless it possesses the following minimum milk yields given in 315 consecutive days of one lactation period, such milk yields shall have been entered or accepted for entry in the Year Book of the Dairy Shorthorn Association and must be supplied with the entry. The exact date of birth and the last date of calving must be given in each case, and when an animal calves between the time of entry and the date of the Show, notification must be at once sent to the Secretary :—

Age on first day of the Show.	Minimum Milk Yields if milked twice daily	Minimum Milk Yields if milked three times daily for more than 30 days after calving.	Minimum Milk Yields if milked four times daily for more than 30 days after calving.
6 years and 3 calendar months and upwards ..	lbs. 8,000	lbs. 9,200	lbs. 10,000
5 years and 3 calendar months and under 6 years and 3 calendar months .. .. .	6,500	7,475	8,125
4 years and 3 calendar months and under 5 years 3 calendar months .. .. .	5,500	6,325	6,875

Animals under 4 years and 3 months old on the first day of the Show, unless they have been registered or accepted by the D.S.A. as being eligible for registration as qualified bull-breeders in respect of a yield of 5,500 lbs. in accordance with the rules of the Association, must be milked in the presence of the Judge or Judges who shall see such milk weighed and all such animals must, in order to entitle them to be included in the Award List, yield up to the following standard :—

	Having calved within 2 calendar months of the 1st day of the Show	Having calved between 2 and 3 calendar months of the 1st day of the Show.	Having calved more than 3 calendar months before the 1st day of the Show.
	lbs. of milk	lbs. of milk.	lbs. of milk.
Heifers, 3 years and 3 calendar months and under 4 years and 3 calendar months of age, not less than .. .. .	23	20	17
Heifers, under 3 years and 3 calendar months of age, not less than .. .. .	16	16	13

No animal shall have its teats sealed during the Show, nor shall the udder be in any way faked, and any infringement of this Rule will entail disqualification.

55. The following conditions apply only to the special prize offered for Pedigree Dairy Shorthorn Bulls calved in 1930. The Bull must comply with the requirements necessary for inclusion in the Dairy Shorthorn Association's list of qualified Bulls and must possess the following further qualifications :—That the following cows in the pedigree of such bull are registered, or are provisionally accepted for registration as qualified cows in the Association's Register, viz. :

1. The sire's dam and her dam.
2. The dam and her dam.
3. The dam of the dam's sire.

The Bull to have been entered in the D.S.A. Register, and no Bull having taken one of these prizes to be eligible to compete.

56. In the Dexter Classes clipping (except in the case of a few hairs on the top of the tail) will disqualify an animal.

57. The following conditions apply to animals entered in the Milk and Butter Test Classes :—The date of last calving must be given on the entry form and, when an animal calves between the date of entry and that of the Show, notice of such calving must be sent to the Secretary or the animal may be disqualified. Animals will be milked 2 or 3 times as desired. Any cow not reaching a standard of 3% Butter Fat on the average of the combined milkings will not be eligible for a prize. Points will be allowed as follows :—

Milk Test Classes :—1 point for each 1lb. of Milk, and points for butter fat calculated as follows :  $\text{Yield of Milk in lbs.} \times \text{Percentage Butter Fat} \div 3$  — yield of Milk in lbs. 1 point for every completed 10 days since calving, calculated to opening day of Show, deducting the first 40 days, maximum allowance 12 points.

Butter Test Classes :—1 point for each ounce of Butter. Lactation points as in Milk Test.

58. Except in the Local and Milk and Butter Test Classes, every animal entered for competition must be entered, or certified as eligible to be entered, in the Herd Book of its Breed, where such Herd Book exists and has been in existence for not less than seven years, and all cattle must be tattooed in accordance with the rules of their respective Breed Societies, where such rules exist. Where an animal is entered by the Exhibitor as eligible for entry in the Herd Book of its breed, proof of such eligibility must be furnished to the Secretary at the time of making the entry.

#### **SHEEP.**

59. Each pen of Ewes must be of the same Flock.

60. Every animal entered for competition must be entered or certified as eligible to be entered, in the Flock Book of its Breed, where such Flock Book exists and has been in existence for not less than seven years, and all Sheep must be tattooed in accordance with the rules of their respective Breed Societies where such rules exist. Where an animal is entered by the Exhibitor as eligible for entry in the Flock Book of its breed, proof of such eligibility must be furnished to the Secretary at the time of making the entry.

#### **PIGS.**

61. All Sows farrowed before May 1, 1930 shall be certified to have had a litter of live Pigs within six months preceding the first day of Exhibition, or to be in-Pig at the time of entering, so as to produce a litter of Pigs, farrowed at their proper time, before the 1st September following. In the case of in-Pig Sows the Prize

will be withheld until the Exhibitor shall have furnished the Secretary with a certificate of farrowing as above. If the required Certificate, which must be on a form obtainable from the Secretary, is not received on or before the 15th September following, the prize awarded will be forfeited.

62. All Pigs exhibited with a Sow shall be her own produce, of the same litter, and not exceeding two months old at the time of the Show.

63. No Sow above 18 months old that has not produced a litter of live Pigs shall be eligible to compete in any of the Classes.

64. In the Berkshire, Large and Middle White, Tamworth and Wessex Saddle-back Classes, all Boars of 2 years of age and over must be certified as having sired at least 3 live litters within the twelve months preceding the date on which entries close. Such litters to be registered or eligible for registration in the N.P.B.A. Herd Book.

65. Any animal in the Pig Classes found to be artificially coloured, whitened or powdered, will be disqualified.

66. In the Berkshire, Large and Middle White, Tamworth and Wessex Saddle-back Classes, animals will be subject to the following Dentition Test, and, in the other Pig Classes, should any question arise as to the age of any exhibit, the Stewards shall, at the request of the Judge, have the state of their Dentition examined by a competent authority and if the state of the Dentition shall indicate that the age of any of the Pigs does not agree with the Dentition Test, the Stewards shall report the same to the Council, who shall have power to disqualify such Pig or Pigs. The following is the state of Dentition in Pigs which will be considered as indicating that they exceed the ages specified below—Six Months: Pigs having their corner permanent incisors cut will be considered as exceeding this age. Nine Months: Pigs having their permanent tusks more than half up, will be considered as exceeding this age. Twelve Months: Pigs having their central permanent incisors up, and any of the three first permanent molars cut, will be considered as exceeding this age. Fifteen Months: Pigs having their lateral temporary incisors shed, and the permanents appearing, will be considered as exceeding this age. Eighteen Months: Pigs having their lateral permanent incisors fully up will be considered as exceeding this age.

67. Except in the Bacon and Porker Pig Classes, every animal entered for competition must be entered or certified as eligible to be entered in the Herd Book of its breed, where such Herd Book exists and has been in existence for not less than seven years, and must conform to the rules of their respective Societies. In the Large Black Classes the official ear-marker bearing the Herd Book number must be in the ear of all pigs entered, and the Judges are instructed not to award prizes unless this regulation is observed, or a reasonable explanation given for the absence of the marker.

## GOATS, PRODUCE, POULTRY, PIGEONS, RABBITS, AND COMPETITIONS.

*For Conditions and Regulations see entry form.*

### ADJUDICATION OF PRIZES.

68. The Judges are instructed as follows, and entries are received subject to this:

a. Not to award any Prize or Commendation unless the entry possesses sufficient merit.



b. Not to award a Prize to any Horse or Mare in the Breeding Classes, unless it is free from unsoundness likely to be transmitted to its progeny ; or, if a Gelding, unless free from unsoundness ; in either case, an accident having temporary consequences only excepted, and in awarding the Hunters' Improvement Society's Medals to give preference to animals showing weight-carrying properties.

c. In awarding Prizes to Cattle, Sheep, and Pigs, to decide according to the relative merits of the animals for Breeding purposes, and not to take into consideration their present value to the butcher.

d. To make the milking capacity and form of udder one of the chief points in awarding Prizes to Cows and Heifers in-milk.

e. To draw the attention of the Stewards to any exhibit that has been improperly prepared for exhibition or is wrongly entered.

f. To give in a " RESERVE NUMBER " in each Class, indicating the animal or exhibit which in their opinion possesses sufficient merit for the Prize, if the animal or exhibit to which the Prize is awarded should become disqualified. Should the " Reserved Number " succeed to a prize, and be itself disqualified, the prize will be forfeited.

g. Immediately after the Judging to deliver to the Stewards their signed awards stating the numbers to which the Prizes are adjudged, and noting all disqualifications.

69. Should any question arise upon which the Judges may desire a further opinion, the Stewards shall provide them with a Referee.

#### PAYMENT OF PRIZES.

70. Cheques for the Prizes awarded (except where further qualification of an animal is required) will be drawn at the meeting of the Finance Committee held in July, 1931, and will then be forwarded by post to the Exhibitors to whom they have been awarded.

#### INTERPRETATION OF CONDITIONS.

71. The Society reserves to itself by its Council the sole and absolute right to interpret these or any other prescribed conditions and regulations, or Prize Sheets, and to arbitrarily settle and determine all matters, questions or differences in regard thereto, or otherwise arising out of or connected with or incident to the Show. Also to refuse and to cancel any entries, disqualify Exhibitors, prohibit exhibition of entries, vary or cancel awards of prizes or reserved numbers, and relax conditions, as the Society may deem expedient.

#### IMPLEMENTS, MACHINERY, ETC.

Entry Forms and Regulations referring to above, the entries for which close on March 11th, can be obtained of the Secretary, 3, Pierrepont Street, Bath.

By Order of the Council, F. H. STORR, *Secretary*.

Telegraph and Telephone :—3010 Bath.

## POULTRY.

## CONDITIONS AND REGULATIONS.

## CHARGES, ETC.

1. Exhibitors may make an unlimited number of Entries on payment of fees as follows :—

	MEMBERS.		NON-MEMBERS.	
	s.	d.	s.	d.
For each entry (Class 1) .. ..	3	0	5	0
„ (Classes 2 to 73) .. ..	2	0	3	0
„ (Classes 74 to 90) .. ..	1	6	2	0

The above fees include coops, food, and attendance.

N.B.—The above fees *must* be sent with the entries, or no notice will be taken of the latter.

2. The privilege of entering at Members' fees is strictly limited to Members of the Bath and West Society elected on or before January 31st, 1931, and subscribing not less than £1 annually.

3. All entries must be made on the printed forms to be obtained of the Secretary (F. H. STERR, 3, Pierrepont Street, Bath), and such forms must be correctly filled up and returned to the Secretary, together with all fees due, on or before April 23rd. Exhibitors are requested to carefully examine the list of Prizes and Conditions, as the Society cannot be responsible for any errors made by Exhibitors in the entry forms, and birds entered in a wrong Class will be necessarily excluded from competition. No alterations can be made in entry forms after they have been received by the Secretary.

4. The Council reserve the right to refuse the entries of any person.

5. Exhibitors must state the price and breed of their birds on their entry forms.

## SHOW YARD.

6. The Judging will take place on *Thursday, May 21st*, and all exhibits must be in the Show Yard by 6 p.m. on *Wednesday, May 20th*, and remain there till 6 p.m. on *Saturday, May 23rd*. Any Exhibitors who send for their birds must do so between 7 and 8 p.m. on that day.

7. All carriage must be prepaid to Bristol Railway Station, otherwise the birds will not be received at the Exhibition; but they will be conveyed free of expense from the Station to the Show Yard and back.

8. No Exhibitor or Servant will be allowed into the tent until the birds have been judged.

9. The Poultry Tent will not be open to the public until 2 o'clock on Thursday, May 21st.

10. A Non-Transferable Admission Ticket for the Exhibition will be sent to each Exhibitor whose entry fees amount to £1 and upwards.

## SALES.

11. All birds may be claimed, at the price put upon them, any time after 4 o'clock on Thursday, May 21st and a sale *must take place* if the price stated be paid to the Clerk in the Poultry Office at the time of claiming. *No alteration can be made in the prices stated on the entry forms and in the Catalogue until after Friday, May 22nd*, when the price may be reduced on payment to the Steward of one shilling per pen on each alteration. Birds must be *sold in pens*, and the price stated must include the basket. Birds entered in selling classes must be sent in separate hampers. A charge of 10 per cent. will be made for all birds sold. The persons who have the management of the sales cannot take charge of birds which are disposed of privately.

## AWARDS.

12. No Second Prize will be given in any of the Classes unless there are three entries, and no Third Prize unless there are six entries.

## DISQUALIFICATION.

13. The Judges are empowered to withhold a prize or prizes where the birds are not considered of sufficient merit, or in the chicken classes where they consider them over age, and are instructed to disqualify any that have been clipped, drawn, trimmed, marked, or dyed. In the Game Classes birds can be shown either dubbed or undubbed.

14. An Exhibitor detected in a false statement as to the age, etc., of any bird, or in any other practice calculated to deceive or mislead the Judges or Stewards, shall forfeit all or any prizes awarded to him or her at the Show, and will be disqualified from competing at any future Show of the Society, and the Council shall have power to inform other Societies of their action in this respect.

15. No person who shall have been shown to the satisfaction of the Council to have been excluded from exhibiting for Prizes at the exhibition of any other Society in consequence of having attempted to obtain a Prize by giving a false Certificate or by other unfair means, and no person who is under exclusion from any Breed Society for fraudulent practices, shall be allowed to exhibit at this or any other Meeting of the Society.

16. Unhealthy birds will not be exhibited, but will be immediately returned to their owners, and the fees will be forfeited.

## PROTESTS.

17. In order to check frivolous and vexatious protests, no protest will be entertained unless accompanied by a deposit of £1 in each case; and in case the protest is not substantiated the deposit may be forfeited to the funds of the Society. All protests must be made before 12 o'clock (noon) on Friday, May 22nd.

## FORFEITS.

18. Persons entering birds and failing to send the same to the Exhibition will forfeit the entrance fee for each pen so left vacant.

## GENERAL.

19. All birds shown must be *bona fide* the property of the Exhibitor.

20. For each pen entered the Exhibitor will receive a label, on which he must legibly write his name and address for the return journey.

21. All eggs laid at the Exhibition will be destroyed.

22. The Stewards pledge themselves to take every care of the birds exhibited, but neither they nor the Society will, in any case, be responsible for any accident, loss, or damage, from whatever cause arising, the exhibits being entered at the sole risk of the Exhibitors, and Exhibitors will be required to hold the Society harmless in the event of loss.

23. In case of death of any bird during the Exhibition, it will be sent back for the inspection of the Exhibitor.

24. The Poultry Department is subject to the Rules and Regulations of the Society and its officers.

*The use of properly-constructed Poultry Baskets will facilitate the safe and speedy conveyance of the birds to and from the Exhibition, and all Birds entered in Selling Classes must be sent in separate hampers.*

*The Society cannot, under any circumstances, undertake to send telegrams to Exhibitors as to Judges' awards.*

*Applications for Catalogues should be made only to the Publishers, "THE CHRONICLE AND HERALD" PRESS, BATH.*

*By Order of the Council,*

3, Pierrepont Street, Bath.

F. H. STORR, Secretary.

TELEGRAMS AND TELEPHONE, 3010, BATH.

(clxiii)

# FINANCIAL STATEMENTS

FOR

# 1930

WITH ITEMS OF 1929 FOR COMPARISON.

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	PAGES
SUMMARY OF CASH ACCOUNT ....	clxiv-clxv
ANNUAL CASH ACCOUNT ....	clxvi-clxxv
ASSETS AND LIABILITIES ACCOUNT ....	clxxvi
FINANCIAL RESULT OF THE SHOW ...	clxxvii

DR.

# The Bath and West and

## SUMMARY OF THE CASH ACCOUNT

### WITH COMPARATIVE

Page of accompany- ing Cash Account.	RECEIPTS.	1930. TORQUAY.			1929. SWINDON.		
		£	s.	d.	£	s.	d.
	<b>GENERAL.</b>						
clxvi	Dividends and Interest .. .. .	758	5	9	980	5	5
"	General .. .. .		1	2	14	8	4
"	Subscriptions .. .. .	1,030	1	0	1,125	18	0
"	Life Members .. .. .				50	0	0
"	Journal .. .. .	41	5	6	43	11	4
					1,829	13	5
	<b>SHOW.</b>						
clxviii	Implements .. .. .	3,095	2	6	2,770	3	11
"	Horses .. .. .				882	11	0
"	Cattle, Sheep, Goats & Pigs .. .. .	1,005	16	0	1,734	2	6
"	Catalogues, Fodder, etc. .. .. .	1,565	5	6	111	18	9
		119	2	0			
		2,690	3	6	2,738	12	3
"	Poultry, Pigeons and Rabbits .. .. .	121	0	6	136	14	3
clxx	Shoeing .. .. .	47	6	0	11	8	0
	County Council Competitions .. .. .	44	3	0			
"	Education and Handicrafts .. .. .	69	6	0	44	2	0
"	Forestry .. .. .	4	1	0	43	14	8
"	Music .. .. .				6	7	0
"	Small Holdings .. .. .				124	12	10
clxxii	Cheese and Butter .. .. .	96	13	6	81	12	1
"	Working Dairy .. .. .	130	13	7	161	12	5
"	Cider .. .. .	51	10	6	28	16	6
"	Admissions .. .. .	6,600	4	0	3,150	3	6
clxxiv	Unapportionable :— Contract Premiums and Cloak Room .. .. .	1021	9	9	925	4	6
	Sales, Fittings, etc. .. .. .	614	9	5	502	5	11
		1,635	19	2	1,427	10	5
"	Subscriptions from Towns .. .. .	1200	0	0	1,200	0	0
					15,786	3	3
"	Experiments .. .. .				20	0	0
					17,615	16	8
clxxiv	Sale of Stock .. .. .				996	18	3
"	Balance due to Bank, Dec. 31st .. .. .				533	2	1
					17,615	16	8
					15,689	13	8

# Southern Counties Society.

FOR THE YEAR ENDED DEC. 31st, 1930.

STATEMENT FOR 1929.

Page of accompany- ing Cash Account.	PAYMENTS.		1930. TORQUAY.		1929. SWINDON.	
			£ s. d.	£ s. d.	£ s. d.	
clxvii	<b>GENERAL.</b>					
"	Salaries .. .. .		1,358 3 7		1,354 19 10	
"	Printing, Postage, Stationery, etc. ..		561 2 5		493 19 1	
"	Journal .. .. .		340 11 7		384 0 10	
				2,259 17 7	2,232 19 9	
clxix	<b>SHOW.</b>					
"	Implements .. .. .		1104 4 0		845 18 11	
"	Horses .. .. .	1,867 6 6			1,899 19 0	
"	Cattle, Sheep, Goats & Pigs .. .. .	3,806 7 0			3,551 7 6	
"	Fodder, etc. .. .. .	969 10 6			770 15 1	
			6,643 4 0		6,202 1 7	
"	Poultry, Pigeons and Rabbits .. ..		563 18 5		511 11 9	
clxxi	Shoeing .. .. .		195 17 10		134 8 2	
"	County Council Competitions .. ..		58 19 2			
"	Bees .. .. .		10 10 0		10 0 0	
"	Education and Handicrafts .. .. .		307 4 2		190 8 3	
"	Forestry .. .. .		183 18 4		155 8 4	
"	Music .. .. .				122 18 3	
"	Small Holdings .. .. .				119 12 6	
"	Horticulture .. .. .		320 2 6		298 0 6	
clxxiii	Cheese and Butter .. .. .		236 10 10		206 11 5	
"	Working Dairy .. .. .		573 13 3		480 15 8	
"	Cider .. .. .		197 11 1		150 12 7	
"	Public Announcements .. .. .		523 11 0		506 11 5	
clxxv	<b>Unapportionable :—</b>					
	Erection of Offices, etc. .. .. .	2,087 3 11			1,568 15 6	
	Carriage of Plant .. .. .	171 17 6			189 13 7	
	Stand Fittings .. .. .	459 1 2			281 19 6	
	Police, Badges, etc. .. .. .	343 8 0			302 5 5	
	Miscellaneous .. .. .	639 6 4			528 15 6	
			3,700 16 11		2,871 9 6	
				14,620 1 6	12,812 8 10	
"	<b>EXPERIMENTS</b> .. .. .			100 14 6	195 3 6	
"	Balance due to Bank, January 1st ..			16,980 13 7	15,240 12 1	
"	Balance in Bank, December 31st ..			533 2 1	449 1 2	
				102 1 0		
			£ 17,615 16 8		15,689 13 3	

January 19th, 1931.

Audited and found correct,

F. CLIFFORD GOODMAN, F.C.A.,  
Auditor.

Passed by Council,

January 27th, 1931.

F. H. STORR,  
Secretary.

## The Bath and West and

DR. CASH ACCOUNT FOR THE YEAR ENDED DEC. 31ST,

RECEIPTS.	1930. TORQUAY.		1929. SWINDON.	
	£	s. d.	£	s. d.
<b>DIVIDENDS AND INTEREST.</b>				
South Australian Stock .. .. .	32	12 10	33	3 2
New Zealand Stock .. .. .	51	17 6	54	17 6
India Stock .. .. .	213	8 7	226	3 0
New South Wales 4% Stock .. .. .	162	6 2	162	6 2
Canadian Pacific Railway Stock .. .. .	47	5 0	48	0 0
Conversion 3½% Loan Stock .. .. .	97	17 0	133	17 6
New South Wales 5% Stock .. .. .	98	8 9	100	0 0
Income Tax returned .. .. .	45	5 10	215	19 8
Bank Interest .. .. .	6	4 1	5	18 5
			758	5 9
<b>GENERAL.</b>				
Sale of Waste Paper .. .. .			1	2
			14	8 4
<b>SUBSCRIPTIONS FROM MEMBERS.</b>				
Arrears .. .. .	25	13 0	28	8 0
Governors .. .. .	140	0 0	141	16 0
Subscribers of £1 and upwards .. .. .	860	8 0	951	4 0
"    " 10/- .. .. .	4	0 0	4	10 0
			1,030	1 0
<b>LIFE COMPOSITIONS</b> .. .. .				
			50	0 0
<b>JOURNAL.</b>				
Sales .. .. .	8	15 0	3	4 10
Advertisements .. .. .	28	18 6	35	19 6
Cloth Bindings .. .. .	3	12 0	4	7 0
			41	5 6
Carried forward .. .. .			1,829	13 5

## Southern Counties Society.

1930, WITH COMPARATIVE STATEMENT FOR 1929.

CR.

PAYMENTS.	1930. TORQUAY.		1929. SWINDON.
<b>SALARIES.</b> Secretary and Editor .. .. . Assistant Secretary .. .. . Office Staff .. .. . Auditor .. .. . Consulting Chemist .. .. .	650 0 0 450 0 0 198 3 7 30 0 0 30 0 0	1,358 3 7	650 0 0 450 0 0 194 19 10 30 0 0 30 0 0
<b>MISCELLANEOUS.</b> Printing, Stationery and Reference Books Postages, Telegrams, Insurance, Cheque and Receipt Stamps .. .. . Ground Rent and Rates .. .. . Property Tax .. .. . Travelling Expenses .. .. . Carriage of Goods .. .. . Subscriptions .. .. . Furniture, Repairs and Fittings .. .. . Hire of Council Rooms .. .. . Fuel and Light .. .. . Telephone .. .. . Council Grants and Allowance to Widow of late Secretary .. .. . Bank Charges and Sundries .. .. . Binding Library Books .. .. .	83 10 5 86 13 7 35 13 6 1 15 0 79 1 9 12 19 2 14 7 6 75 1 6 4 5 6 15 3 1 14 0 2 120 0 0 18 11 3	561 2 5	67 9 3 77 0 6 35 15 8 1 15 0 53 9 1 4 14 0 12 13 0 52 10 6 2 6 0 19 17 5 13 13 3 100 0 0 31 12 11 21 2 6
<b>JOURNAL.</b> Printing and Stationery .. .. . Plans and Blocks .. .. . Distribution .. .. . Postages, Reference Books, etc. .. .. . Authors .. .. .	275 1 7 2 17 0 28 2 0 12 10 0 22 1 0	340 11 7	303 8 7 9 5 9 28 13 6 8 10 0 34 3 0
Carried forward .. ..		2,259 17 7	384 0 10



Dr.

CASH ACCOUNT—*continued.*

RECEIPTS.	1930. TORQUAY.			1929. SWINDON.		
	£	s.	d.	£	s.	d.
Brought forward ..				1,829	13	5
<b>IMPLEMENTS.</b>						
Fees for Space :—						
Machinery in Motion Shedding ..	1023	10	0			896 10 0
Ordinary .. ..	203	15	0			268 15 0
Miscellaneous .. ..	266	5	0			101 5 0
Special .. ..	707	10	0			618 10 0
Uncovered Ground .. ..	738	9	6			745 9 5
Catalogue Fees .. ..	57	8	0			59 14 6
Entry Fees .. ..	67	0	0			65 10 0
Additional Assistants' Tickets .. ..	33	5	0			14 10 0
				3,095	2	6
						2,770 3 11
<b>HORSES, CATTLE, SHEEP, GOATS &amp; PIGS</b>						
Horses :—Entry Fees & Fines 355 10 0						487 8 0
Grand Stand .. ..						310 3 0
Admissions .. ..	573	6	0			85 0 0
Special Prizes .. ..	77	0	0			
	1,005	16	0			882 11 0
<b>Cattle, Sheep, Goats and Pigs.</b>						
Entry Fees .. ..	869	2	6			1,084 12 6
Fines .. ..	6	10	0			24 0 0
Special Prizes .. ..	689	13	0			635 10 0
	1,565	5	6			1,744 2 6
<b>Catalogues, Manure and</b>						
Fodder .. ..	£114	2	0			99 6 9
Contribution to Sports Fund .. ..	5	0	0			12 12 0
Advertisement in Prize List .. ..						
	119	2	0			111 18 9
				2,690	3	6
						2,738 12 3
<b>POULTRY, PIGEONS &amp; RABBITS.</b>						
Entry Fees .. ..	112	0	0			134 3 3
Commission on Sales .. ..	4	10	6			0 10 0
Special Prizes .. ..	4	10	0			1 15 0
				121	0	6
						136 14 3
Carried forward .. ..				7,735	19	11

CASH ACCOUNT—continued.

CR.

	PAYMENTS.	1930. TORQUAY.		1929. SWINDON.	
		£	s. d.	£	s. d.
	Brought forward ..			2,259	17 7
	<b>IMPLEMENTS.</b>				
	Shedding .. .. .	953	10 7	707	2 3
	Stewards and Assistants .. .. .	83	8 9	84	15 2
	Printing, Stationery and Fees returned ..	67	4 8	54	1 6
				1,104	4 0
	<b>HORSES, CATTLE, SHEEP, GOATS &amp; PIGS.</b>				
	Horses :—Prizes .. .. £906 1 1			1,080	4 5
	Shedding & Grand Stand .. 758 9 4			700	18 0
	Stewards and Assistants .. 74 13 2			68	14 1
	Judges, etc. .. 38 2 11			47	12 6
	Fees returned ..			2	10 0
		1,867	6 6	1,809	19 0
	Cattle, Sheep, Goats and Pigs.				
	Cattle Prizes .. .. £1,234 3 0			1,274	14 4
	Sheep .. .. . 663 0 0			516	0 0
	Goats .. .. . 27 15 0			35	0 0
	Pigs .. .. . 527 0 0			500	0 0
	Shedding and Canvas .. 1,090 18 8			1,005	11 0
	Stewards and Assistants .. 87 2 6			72	15 0
	Judges .. .. . 162 5 10			134	4 8
	Fees returned, etc. .. 14 2 0			13	2 6
		3,806	7 0	3,551	7 6
	Buildings .. .. . £436 2 10			328	4 5
	Fodder .. .. . 269 13 8			218	12 3
	Forage Steward & Assistants .. 15 3 6			14	8 6
	Veterinary Inspectors .. 33 5 8			13	5 2
	Ditto (1929) .. .. 19 12 0				
	Rosettes .. .. . 11 0 0			9	13 0
	Printing, Stationery, etc. 152 1 10			149	3 8
	Refreshments for Judges .. 22 11 0			17	8 1
	Sports Prizes .. .. 10 0 0				
		969	10 6	750	15 1
				6,643	4 0
	<b>POULTRY, PIGEONS &amp; RABBITS.</b>				
	Shed, Staging, Pens, etc. .. ..	210	13 6	146	3 4
	Steward and Assistants .. .. .	26	10 6	29	10 2
	Judges .. .. . 16 6 6			13	13 6
	Prizes .. .. . 273 0 0			278	15 0
	Printing, Stationery, Carriage, etc. ..	37	7 11	43	9 9
				56	18 5
	Carried forward .. ..			10,571	4 0

DR.

CASH ACCOUNT—*continued.*

	RECEIPTS.	1930. TORQUAY.		1929. SWINDON.	
		£	s. d.	£	s. d.
	Brought forward ..			7,785	19 11
	<b>SHOEING</b>				
	Entry Fees .. .. .	17	6 0		11 8 0
	Special Prizes .. .. .	30	0 0		
				47	6 0
	<b>COUNTY COUNCIL COMPETITIONS.</b>				
	Entry Fees .. .. .		4 6		
	Special Prizes .. .. .	43	18 6	44	3 0
	<b>EDUCATION and HANDICRAFTS.</b>				
	Fees for Space, Handicrafts ..			69	6 0
					44 2 0
	<b>FORESTRY.</b>				
	Entry Fees .. .. .	3	0 0		1 15 0
	Special Prizes .. .. .	1	1 0		24 10 0
	Contribution towards Grants ..				17 9 8
				4	1 0
					43 14 8
	<b>MUSIC.</b>				
					6 7 0
	<b>SMALL HOLDINGS.</b>				
					124 12 10
	Carried forward ..			7,900	15 11

CASH ACCOUNT—*continued.*

CR.

PAYMENTS.		1930. TORQUAY.		1929. SWINDON.	
		£	s. d.	£	s. d.
	Brought forward ..	10,571	4 0		
<b>SHOEING.</b>					
Prizes .. .. .		71	0 0	42	0 0
Judge .. .. .		7	18 0	7	6 6
Anvils, Forges, Coals, Horses, Printing, etc.		12	10 6	12	1 6
Shedding .. .. .		83	8 4	65	3 11
Stewards and Assistants .. .. .		7	1 0	7	16 3
Exhibition of Models (1929) .. .. .		14	0 0		
			195 17 10	134	8 2
<b>COUNTY COUNCIL COMPETITIONS.</b>					
Prizes .. .. .		37	10 0		
Steward and Assistants .. .. .		6	3 6		
Canvass .. .. .		8	2 2		
Cartage of Sheep .. .. .		5	0 0		
Printing .. .. .		2	3 6		
			58 19 2		
<b>BEEES.</b>					
Shedding .. .. .		1	9 0		
Grant to Beekeepers' Association .. .. .		7	1 6	10	0 0
Printing .. .. .		1	19 6		
			10 10 0		
<b>EDUCATION and HANDICRAFTS.</b>					
Pavilions and Staging .. .. .		283	8 7	179	15 3
Stewards and Assistants .. .. .		20	9 6	8	8 9
Printing, Postage, Carriage, etc. .. .. .		3	6 1	2	4 3
			307 4 2	190	8 3
<b>FORESTRY.</b>					
Pavilion and Staging .. .. .		102	5 7	78	7 1
Steward and Assistants .. .. .		9	4 6	5	17 2
Judges .. .. .		4	14 8		
Printing, Postage, etc. .. .. .		6	5 6	7	1 3
Materials for Competitions .. .. .		1	1 0	18	0 4
Prizes, Grants, etc. .. .. .		31	12 7	46	2 6
Ditto (1929) .. .. .		28	14 6		
			183 18 4	155	8 4
<b>MUSIC.</b>				122	18 3
<b>SMALL HOLDINGS.</b>				119	12 6
	Carried forward .. .. .	11,327	13 6		

DR.

CASH ACCOUNT—*continued.*

RECEIPTS.				1930. TORQUAY.	1929. SWINDON.
				£ s. d.	£ s. d.
Brought forward ..				7,900 15 11	
<b>CHEESE and BUTTER.</b>					
Entry Fees and Fines .. .. .			61 11 0		46 17 6
Sales .. .. .			9 2 6		15 4 7
Special Prizes .. .. .			26 0 0		19 10 0
				96 13 6	81 12 1
<b>WORKING DAIRY.</b>					
Entry Fees, Competitions .. .. .	£27	1	0		18 13 6
.. Tests .. .. .	26	10	0		48 0 0
				53 11 0	66 13 6
Sale of Produce .. .. .			57 11 7		68 8 11
Special Prizes .. .. .			19 11 0		26 10 0
				130 13 7	161 12 5
<b>CIDER.</b>					
Entry Fees .. .. .			38 14 0		26 2 6
Sales .. .. .			2 16 6		2 14 0
Special Prizes .. .. .			10 0 0		
				51 10 6	28 16 6
<b>ADMISSIONS.</b>					
Admissions at 5/- .. .. .			584 10 0		248 0 0
.. .. 4/- .. .. .			3,023 8 0		926 12 0
.. .. 2/6 .. .. .			2,048 7 6		1,220 17 6
.. .. 2/- .. .. .			82 2 0		28 4 0
.. .. 1/- .. .. .			682 15 0		631 2 0
Schools, etc. .. .. .			58 1 0		46 19 0
Season Tickets and Motors .. .. .			121 0 6		48 9 0
				6,600 4 0	3,150 3 6
Carried forward .. .. .				14,779 17 6	

CASH ACCOUNT—*continued.*

CR.

	PAYMENTS.	1930. TORQUAY.			1929. SWINDON.		
		£	s.	d.	£	s.	d.
	Brought forward ..				11,327	13	6
	<b>HORTICULTURE.</b>						
	Gratuities to Exhibitors .. .. .	120	10	0		136	10 0
	Pavilion and Staging .. .. .	167	12	6		140	19 6
	Steward and Assistant, Printing, etc. ..	23	0	0		20	11 0
					320	2	6
	<b>CHEESE and BUTTER.</b>					298	0 6
	Judges .. .. .	7	14	9		7	15 0
	Prizes .. .. .	141	5	0		129	10 0
	Stewards and Assistants .. .. .	13	2	5		11	16 10
	Pavilion and Staging .. .. .	67	12	5		52	2 1
	Printing, Stationery, Carriage, etc. ..	6	16	3		5	7 6
					236	10	10
	<b>WORKING DAIRY.</b>					206	11 5
	Stewards and Assistants .. .. .	76	8	8		59	19 1
	Judges and Demonstrators .. .. .	31	16	6		33	15 3
	Buildings .. .. .	264	18	10		188	17 11
	Printing, Stationery, Postage, etc. ..	8	17	9		4	2 10
	Utensils, Carriage, etc. .. .. .	74	6	4		59	6 6
	Prizes .. .. .	43	2	9		57	9 6
	Coal, Salt, Ice, etc. .. .. .	8	1	1		14	6 0
	Milk and Cream .. .. .	62	8	4		68	18 7
	Purchase of Plant .. .. .	3	13	0			
					573	13	3
	<b>CIDER.</b>					486	15 8
	Pavilion and Staging .. .. .	60	7	6		41	17 3
	Steward and Assistants .. .. .	17	15	0		19	2 7
	Judge .. .. .	7	7	11		4	9 8
	Prizes .. .. .	80	0	0		60	0 0
	Analyses, Carriage, Printing, etc. ..	32	0	8		25	3 1
					197	11	1
	<b>PUBLIC ANNOUNCEMENTS.</b>					150	12 7
	Advertising .. .. .	171	10	10		154	14 5
	Billposting .. .. .	220	0	0		216	0 0
	Railway Placards .. .. .	77	5	6		81	6 6
	Printing .. .. .	54	14	8		54	10 6
					523	11	0
	Carried forward .. .. .				13,179	2	2

DR.

CASH ACCOUNT—*continued.*

	RECEIPTS.	1930. TORQUAY.		1929. SWINDON.	
		£	s. d.	£	s. d.
	Brought forward ..			14,779	17 6
	<b>SHOW (Unapportionable).</b>				
	Sales, Fittings, etc. .. ..	597	2 4	502	5 11
	Contract Premiums .. ..	928	14 5	881	11 1
	Cloak Rooms, Lavatories, etc. ..	92	15 4	43	13 5
	Refund on Timber and Carriage ..	17	7 1		
				1,635	19 2
				1,427	10 5
	<b>SUBSCRIPTIONS FROM TOWNS.</b>				
	Bristol for 1931 Show .. ..	800	0 0	800	0 0
	Torquay for 1930 Show .. ..	400	0 0	400	0 0
				1,200	0 0
				1,200	0 0
	<b>EXPERIMENTS.</b>				
	Grants .. .. .			20	0 0
				17,615	16 8
				14,159	12 11
	Sale of Conversion $3\frac{1}{2}\%$ Inscribed Stock			996	18 3
	Balance due to Bank December 31st ..			533	2 1
		£	17,615 16 8	15,689	13 3

CASH ACCOUNT—*continued.*

CR.

	PAYMENTS.	1930. TORQUAY.		1929. SWINDON.	
		£	s. d.	£	s. d.
	Brought forward ..			13,179	2 2
	<b>SHOW (Unapportionable).</b>				
	Official Buildings .. .. .	1,796	1 1	1,385	19 6
	Hoarding .. .. .	291	2 10	182	16 0
	Carriage of Plant .. .. .	171	17 6	189	13 7
	Stand Fittings .. .. .	450	1 2	281	19 6
	Insurance .. .. .	59	15 8	59	17 11
	Furnishing Official Buildings, etc. ..	64	3 6	41	14 6
	Mess Room, Allotment Expenses, etc. ..	38	13 2	20	4 7
	Gatekeepers, Yardmen and Messengers ..	149	5 0	137	1 8
	Stewards of Finance and Treasurer ..	23	2 7	16	8 4
	Inspector of Cash and Assistant ..	44	5 5	44	18 11
	Secretaries' Expenses and Finance and				
	Treasurers' Clerks .. .. .	38	17 7	34	16 3
	Police, Badges, etc. .. .. .	343	8 0	302	5 5
	Purchase of Plant .. .. .	82	3 6	31	16 9
	Catalogues, Printing, Stationery and Com-				
	mission on Sale of Season Tickets ..	100	10 3	84	12 10
	Telegraph and Telephone .. .. .	32	0 5	27	3 9
	Council Grants and Cloak Room Sundries	6	0 3		
	Rent of Field for Garage .. .. .			30	0 0
				3,700	16 11
				2,871	9 6
	<b>EXPERIMENTS.</b>				
	Cider—Grant to Cider Institute .. ..	100	0 0	100	0 0
	Limestone, Travelling Expenses .. ..	14	6	9	11 0
	Poor Pastures, Travelling Expenses and				
	Council Grant .. .. .			85	12 6
				100	14 6
				16,980	13 7
				15,240	12 1
	Balance due to Bank, January 1st ..			533	2 1
	Balance in Bank, December 31st ..			102	1 0
				£ 17,615	16 8
				15,689	13 8

JANUARY 19TH, 1931.

I hereby certify that I have examined the foregoing accounts for the year ended December 31st, 1930, compared the payments entered with the vouchers, and found them all in order and correct.

F. CLIFFORD GOODMAN, F.C.A.,  
Auditor,

Passed by Council,  
January 27th, 1931.

F. H. STORR, Secretary.





# Bath and West and Southern Counties Society.

## STATEMENT SHOWING FINANCIAL RESULT OF THE TORQUAY (1930) SHOW.

Printed Financial State- ments.				
Page		£ s. d.	£ s. d.	£ s. d.
clxiv	Show Receipts as per Summary .. ..	15,786 3 3		
clxxiv	Less 1929 Receipts, received in 1930 .. ..	400 0 0		
				15,386 3 3
clxv	Show Payments as per			
	Summary .. ..	14,620 1 6		
clxxv	Less Show Plant			
	purchased .. 82 3 6			
	Less 10% for			
	Depreciation .. 8 4 6			
		73 19 0		
			14,546 2 6	
clxix, clxxi	Less 1929 A/cs paid in 1930 .. ..	62 6 6		
			14,483 16 0	
clxxvi	Show A/cs unpaid .. ..	39 0 0		
				14,522 16 0
	Profit on Torquay Show .. ..			£863 7 3

## BATH AND WEST AND SOUTHERN COUNTIES SOCIETY.

FOR THE

*Encouragement of Agriculture, Arts, Manufactures and Commerce.*

## LIST OF MEMBERS, 1931.

## PATRON.

HIS MOST GRACIOUS MAJESTY THE KING.

## PRESIDENT.

HIS GRACE THE DUKE OF BEAUFORT, G.C.V.O., Badminton, Gloucestershire.

## TRUSTEES.

THE MOST HON. THE MARQUIS OF BATH, K.G.

THE RIGHT HON. THE EARL OF RADNOR.

H. B. NAPIER, Esq.

J. F. SHELLEY, Esq.

*Names thus (\*) distinguished are Governors.**Names thus (†) distinguished are Life Members.**\*\* Members are particularly requested to make the Secretary acquainted with any errors in the names or residences.*

Name.	Residence	Sub- scriptions		
		£	s.	d.
*†His Most Gracious Majesty the King .. .. .	Windsor Castle .. .. .	..	..	..
*†Wales, H.R.H. Prince of, K.G.	St. James' Palace, London .. .. .	..	..	..
*†York, H.R.H. Duke of, K.G.	St. James' Palace, London .. .. .	..	..	..
Ackers, Chas. P. .. .. .	Huntley Manor, Gloucester .. .. .	1	0	0
Ackers, Mrs. .. .. .	Huntley Manor, Gloucester .. .. .	1	0	0
Acland, Col. A. Dyke .. .. .	Feniton Court, Honiton .. .. .	1	0	0
Acland, Right Hon. Sir F. Dyke, Bart. .. .. .	Killerton, Exeter .. .. .	1	0	0
Adams, Rowland .. .. .	The Rosery, Long Ashton, Bristol .. .. .	1	0	0
*Alexander, G. C. .. .. .	Manor House, Winterbourne Stoke Salisbury .. .. .	2	2	0
Alexander, Hubert .. .. .	5, High Street, Cardiff .. .. .	1	1	0
Alfa Laval Co. (Ltd.) .. .. .	Alfa Laval House, 34, Grosvenor Road, London, S.W.1. .. .. .	1	0	0
Allen, A. .. .. .	Chesterblade, Shepton Mallet .. .. .	1	0	0
Allen & Foster .. .. .	Corn and Seed Merchants, Shepton Mallet .. .. .	1	1	0
Allen, W. T. .. .. .	Bradley House, West Pennard, Bridgwater .. .. .	1	0	0

Name	Residence	Sub- scriptions
		£ s. d.
Allison, F. . . . .	Newbiggin, Penrith, Cumberland . .	1 0 0
Anglo-Continental Guano Works . . . . .	Dock House, Billiter Street, E.C.3.	1 0 0
*Ansdell, C. W. . . . .	Leckford Abbas, Stockbridge, Hants.	2 0 0
Anstruther, C. J. . . . .	Woolston Grange, Williton, Somerset	1 1 0
*†Aplin, R. M. S. . . . .	Southdown, Warminster, Wilts . . . .	..
†Aplin, Mrs. R. M. S. . . . .	Southdown, Warminster, Wilts . . . .	..
Arbuthnot, W. R. . . . .	Plawhatch Farm, Sharpthorne, nr. East Grinstead . . . . .	1 0 0
Argent, W. A. . . . .	Ghyll Manor, Ruspur, Sussex . . . .	1 0 0
Arkwright, J. P. . . . .	Hatton House, Warwick . . . . .	1 0 0
Armitage, G. P. . . . .	Conkwell Grange, Limpley Stoke, near Bath . . . . .	1 0 0
Armitage, S. C. . . . .	Lenton Fields, Nottingham . . . . .	1 0 0
Armitage, T. C. . . . .	Dean Court, Taunton . . . . .	1 1 0
Armitage, Mrs. . . . .	Dean Court, Taunton . . . . .	1 1 0
Armstrong, J. E. Evitt . . . . .	Woodlands, Leigh Woods, Bristol . .	1 0 0
Arnold & Sons . . . . .	61, Welbeck Street, London, W.1 . .	1 0 0
†Ashcomb, Lord . . . . .	Denbies, Dorking . . . . .	..
Asher, S. G. . . . .	Ascot Place, Ascot . . . . .	1 0 0
Associated Manufacturers Co. . . . .	46-48, Wharfedale Road, Kings Cross, London, N.1 . . . . .	1 0 0
*Astor, Viscount . . . . .	Cliveden, Taplow, Bucks . . . . .	2 0 0
Austin, A. . . . .	Newton House, Sturminster Marshall, Dorset . . . . .	1 1 0
Austin, E. A. . . . .	Baltonsborough, Glastonbury . . . .	1 1 0
†Avebury, Lord . . . . .	High Elms, Hayes, Kent . . . . .	..
†Aveling, Thomas L. . . . .	Rochester . . . . .	..
Avon Manure Company (Ld.) . . . . .	St. Philip's Marsh, Bristol . . . . .	1 0 0
Awdry, E. M. . . . .	Chippenharn, Wilts . . . . .	1 1 0
Ayre, W. . . . .	Hurecot, Somerton, Somerset . . . .	1 1 0
Babcock, Miss . . . . .	Shawlands, Lingfield, Surrey . . . .	1 0 0
Baddock, S. H. . . . .	Holmwood, Westbury-on-Trym, Bristol . . . . .	1 1 0
Bailey, W. T. & A. G. . . . .	Grist House Farm, Hemel Hemp- stead, Herts. . . . .	1 0 0
Baillie-Hamilton, The Hon. C. W., M.P. . . . .	1, Montague Place, London, W.1 . .	1 1 0
Bainbridge, Mrs. R. C. . . . .	Elfordleigh, Plympton, Devon . . . .	1 0 0
Baker, Herbert M. . . . .	The Holmes, Stoke Bishop, Bristol .	1 0 0
†Baker, Hiatt C. . . . .	Oaklands, Almondsbury . . . . .	..
Bamford, J. (Bamfords, Ld.) . . . . .	Uttoxeter . . . . .	1 0 0
Bamlett, A. C. (Ld.) . . . . .	Thirsk . . . . .	1 0 0
Bankier, Capt. A. A. . . . .	Calvary Club, London . . . . .	1 0 0
Barber, J. Guttridge . . . . .	Fylde House, Oxford Road, Exeter .	1 0 0
Barham, G. T. . . . .	Sudbury Park, Wembley, Middlesex .	1 1 0
Barker, Prof. B. T. P. . . . .	Research Station, Long Ashton, Bristol . . . . .	1 0 0
*Barker-Hahlo, H. . . . .	.. .. .	2 0 0

Name	Residence	Subscriptions		
		£	s.	d.
Barkla, Stinchcombe & Cole (Ld.) .. .. .	69, Queen Square, Bristol .. ..	1	0	0
Barnes, Capt. Sedley .. ..	Trent Manor, Sherborne, Dorset ..	1	0	0
Barnes, Major-Gen. Sir R. W. R., K.C.B., D.S.O. .. ..	Oakhay, Stoke Canon, near Exeter ..	1	0	0
Barnett, D. P. .. ..	Walterston, Ilancarvan, Cowbridge ..	1	0	0
†Barrett, A. G. .. ..	Eastbrook, near Taunton .. ..	..	..	..
Barrett, Col. W. .. ..	Moredon, North Curry, Taunton ..	1	0	0
Barry, Lieut.-Col. A. P. .. ..	.. .. .	1	0	0
Barstow, J. J. J. .. ..	The Lodge, Weston-super-Mare ..	1	1	0
Basic Slag and Phosphate Co. (Ld.) .. .. .	69, Queen Victoria Street, London, E.C.4. .. ..	1	1	0
Bastard, H. E. .. ..	Tinten Manor, St. Tudy, S.O., Cornwall .. ..	1	0	0
Bate, F. A. .. ..	Launceston, Cornwall .. ..	1	0	0
*†Bath, Marquis of, K.G. .. ..	Longleat, Warminster .. ..	..	..	..
Bath Gas Company .. ..	Bath .. ..	1	0	0
Bathurst, Major Sir F. Hervey, Bart., D.S.O. .. ..	Somborne Park, King's Somborne, Hants .. ..	1	1	0
Bathurst, Lady K. Hervey .. ..	Somborne Park, King's Somborne, Hants .. ..	1	1	0
Batstone, E. J. .. ..	54, High Street, Wells, Somerset ..	1	1	0
Batt, Lt.-Col. R. C., C.B.E., M.V.O. .. ..	Gresham Hall, Norwich .. ..	1	0	0
*†Batten, Major H. C., D.S.O. .. ..	Aldon, Yeovil .. ..	..	..	..
Batten-Pooll, R. H. .. ..	Road Manor, Bath .. ..	1	0	0
†Baxendale, J. Noel .. ..	Froxfield Green, Petersfield .. ..	..	..	..
Bayford, Lord .. ..	Bayford Lodge, Wincanton .. ..	1	0	0
†Beadle, F. .. ..	Stowey Farm, Timberscombe, Taunton .. ..	..	..	..
Beak, J. D. .. ..	Maiden Bradley, Bath .. ..	1	1	0
Beauchamp, D. C. .. ..	Upton House, Upton Cheyney .. ..	1	0	0
Beauchamp, Sir F. B., Bart. .. ..	Woodborough House, Peasedown St. John, Bath .. ..	1	1	0
Beauchamp, J. F. H. .. ..	Woodborough House, Peasedown St. John, Bath .. ..	1	0	0
Beauchamp, L. B. .. ..	Norton Hall, near Bath .. ..	1	0	0
*Beaufort, Duke of .. ..	Badminton, Gloucestershire .. ..	2	0	0
Bedford, Duke of, K.G. .. ..	Woburn Abbey, Bletchley .. ..	1	0	0
Bell, Sir Henry, Bart. .. ..	Mynthurst, Reigate, Surrey .. ..	1	1	0
Bell, Major H. J., M.C. .. ..	Bakers Farm, Shipley, Horsham ..	1	0	0
Bennett, Brothers .. ..	Journal Office, Salisbury .. ..	1	1	0
Bennett, H. E. .. ..	Walmer House, Bordyke, Tonbridge, Kent .. ..	1	1	0
Bennett, R. A. .. ..	Thornbury, Glos. .. ..	1	0	0
Benyon, H. A. .. ..	Upton Court, near Reading .. ..	1	1	0
*Benyon, J. Herbert .. ..	Englefield House, Reading .. ..	5	0	0
Berkeley, R. G. .. ..	Spetchley Park, nr. Worcester ..	1	0	0

Name.	Residence.	Subscriptions.		
		£	s.	d.
Berry, Sir Gomer, Bart. . . . .	Pendley Stock Farms, Tring, Herts	1	0	0
Berrymann, F. H. . . . .	Field House, Shepton Mallet . . . . .	1	1	0
Bessant, W. . . . .	Skinner's Farm, Woolland, Blandford, Dorset . . . . .	1	0	0
†Best, F. C. . . . .	Vivod, Llangollen . . . . .	..	..	..
†Best, H. G. . . . .	Vivod, Llangollen . . . . .	..	..	..
†Best, Capt. W. . . . .	Vivod, Llangollen . . . . .	..	..	..
†Best, Mrs. W. . . . .	Vivod, Llangollen . . . . .	..	..	..
Best, Hon. J. W., O.B.E. . . . .	Hineknowle, Melplash, Dorset . . . . .	1	0	0
Best, Hon. Mrs. J. W. . . . .	Hineknowle, Melplash, Dorset . . . . .	1	1	0
Betts, J. R. . . . .	Greenhill Farm, Otham, Maidstone	1	0	0
Beynon, Sir J. W., Bart., C.B.E. . . . .	Merthyr House, Cardiff . . . . .	1	1	0
Bindley, W. A. . . . .	36, Augustus Road, Edgbaston . . . . .	1	0	0
Birmingham, C. . . . .	Nutscale, The Parks, Minehead . . . . .	0	10	0
Bisdee, T. G. . . . .	Hutton Court, Weston-super-Mare	1	0	0
†Blackburn, H. P. . . . .	Donhead Hall, Salisbury . . . . .	..	..	..
†Blackstone, G. M. . . . .	Blackstone & Co., Ltd., Stamford..	..	..	..
Blackwell, R. . . . .	Basket Factory, Braunton, N. Devon . . . . .	1	0	0
Blair, D. R. . . . .	Furnivalls, Amersham, Bucks	1	0	0
Blake, Col. M. Lock . . . . .	Bridge, S. Petherton . . . . .	1	0	0
Bland, Major V. S. . . . .	The Warren, Aldbourne, Marlborough, Wilts . . . . .	1	0	0
Blathwayt, R. W. . . . .	Dyrham Park, Chippenham . . . . .	1	1	0
†Bledisloe, Lord, K.B.E. . . . .	Lydney Park, Gloucester . . . . .	..	..	..
Blythswood, Lady . . . . .	Penrice Castle, Reynoldston, S.O., Glamorgan . . . . .	1	0	0
Board, W. R. . . . .	Great Frampton, Llantwit Major, Cardiff . . . . .	1	0	0
*†Boles, Lt.-Col. Sir Dennis F., Bart., C.B.E., D.L. . . . .	Watts House, nr. Taunton . . . . .	..	..	..
*Boles, G. F. . . . .	Watts House, nr. Taunton . . . . .	2	0	0
Bolitho, Lieut.-Col. E. H. W., D.S.O. . . . .	Trengwainton, Chyandour, Penzance	1	0	0
Bolitho, R. F. . . . .	Ponsandane, Penzance . . . . .	1	1	0
Bond, E. (W. Evans & Co.) . . . . .	Hele, Cullompton . . . . .	1	1	0
Boots Pure Drug Co. (Ltd.) . . . . .	Station Street, Nottingham . . . . .	1	0	0
Boscawen, Rev. A. T. . . . .	Ludgvan Rectory, Long Rock, R.S.O., Cornwall.. . . .	1	0	0
†Bowerman, Alfred . . . . .	Sydney Villa, Broadclyst, Exeter	..	..	..
Bowring, R. A. . . . .	Rockhill, Keynsham . . . . .	1	0	0
Box, Miss D. . . . .	Darlingscote, Shipton-on-Stour . . . . .	1	0	0
Braby, F. & Co. (Ltd.) . . . . .	Ashton Gate Works, Bristol . . . . .	1	0	0
Brake, A. . . . .	Brearley, Tintinhull, Yeovil . . . . .	1	0	0
Brassey, Col. E., M.V.O. . . . .	Dauntsey Park, Chippenham . . . . .	1	0	0
†Brassey, Capt. R. B. . . . .	Cottesbrooke Hall, Northampton . . . . .	..	..	..
Bray, Miss E. . . . .	Devon C.C. Offices, 1, Richmond Road, Exeter . . . . .	1	0	0
Brent, C. . . . .	Clampit, Callington, Cornwall . . . . .	1	0	0
Brenton, W. (Ltd.) . . . . .	St. Germans, Cornwall . . . . .	1	0	0

Name.	Residence.	Sub- scriptions		
		£	s.	d.
Bridges, J. W. . . . .	Croydon Hall, Washford, Somerset	1	0	0
<i>Bristol Times and Mirror</i> , Proprietors of . . . . .	Bristol . . . . .	1	0	0
British Oil & Cake Mills (Ld.)	Cleveland Street, Hull . . . . .	1	0	0
Brittan, Col. R., D.S.O. . . . .	Failand Hill, Failand, Bristol . . . . .	1	0	0
Britten, Forester . . . . .	Kenswick Manor, Worcester . . . . .	1	0	0
†Broadmead, H. . . . .	Enmore Castle, Bridgwater . . . . .	..	..	..
†Brocklehurst, H. D. . . . .	Sudeley Castle, Winchcombe . . . . .	..	..	..
Brockman, F. D. . . . .	Broxmoor, Herts . . . . .	1	0	0
Brooks, E. K. . . . .	Coombe Farm, Thatcham, Berks . . . . .	1	0	0
Brooksbank, H. L. . . . .	Sandrock, Tickhill, Yorks . . . . .	1	0	0
Brown, F. E. . . . .	1,403, Neath Road, Swansea . . . . .	1	0	0
Brown, J. . . . .	Tellisford House, Clifton Down, Bristol . . . . .	1	0	0
Browne, Capt. A. S. C. . . . .	Gorsey Leaze, Malmesbury . . . . .	1	0	0
Browning, T... . . . .	Nash End Farm, Eastington, Stonehouse, Glos. . . . .	0	10	0
Browning, W. . . . .	Nash End Farm, Eastington, Stone- house, Glos. . . . .	0	10	0
†Bruford, E. J. . . . .	Nerrols, Taunton . . . . .	..	..	..
Bruford, R. . . . .	Nerrols, Taunton . . . . .	1	0	0
Brymer, W. J. . . . .	West Down Lodge, Winchester . . . . .	1	0	0
Buchanan, W. G. . . . .	Manor House Farm, Abergavenny . . . . .	1	0	0
Buck, D. . . . .	Pentwyn, Caerleon, Mon. . . . .	1	0	0
Buckingham, Rev. C. L. . . . .	Bickleigh Rectory, near Tiverton . . . . .	1	1	0
†Buckingham, Rev. Preb. . . . .	Leigh House, Manston Terrace, Exeter, Devon . . . . .	..	..	..
*†Buist, H. Massac . . . . .	9 & 10, Gardnor Mansions, Church Row, Hampstead, London, N.W.3 . . . . .	..	..	..
Buller, Capt. M. L. . . . .	Downes, Crediton . . . . .	1	0	0
Bullocks, Miss M. A. . . . .	Metchley, Barlows Road, Edgbas- ton, Birmingham . . . . .	1	1	0
Buncombe, E. H. . . . .	Ford House, Wellington, Somerset . . . . .	1	1	0
Burdon, Lt.-Col. W. B. C. . . . .	West Crudwell, Malmesbury . . . . .	1	0	0
Burnard & Alger . . . . .	Plymouth . . . . .	1	0	0
Burns, H. S. . . . .	Goblin Combe, Cleveve, Somerset . . . . .	1	0	0
Busfield, Miss L. . . . .	Rayfield, Chipping Sodbury . . . . .	1	0	0
*†Bush, C. de Lisle . . . . .	Eastington Park, Stonehouse, Glos. . . . .	..	..	..
†Bush, H. G. . . . .	The Grove, Alveston, Glos. . . . .	..	..	..
Bush, Mrs. L. E. . . . .	St. Mary's, Atlantic Road, South, Weston-super-Mare . . . . .	1	1	0
Busk, Mrs. . . . .	Wraxall Manor, Cattistock, Dorset . . . . .	1	0	0
*Bute, The Marquis of . . . . .	The Castle, Cardiff . . . . .	2	0	0
Butler, W. . . . .	Gatcombe Farm, Flax Bourton, Bristol . . . . .	1	0	0
†Buxton, Major Gerard . . . . .	Tockenham Manor, Wootton Bassett, Wilts . . . . .	..	..	..
Caesar, H. and J. . . . .	Knutsford, Cheshire . . . . .	1	0	0
Cadbury, Major Egbert . . . . .	Oakleigh, Leigh Woods, Bristol . . . . .	1	0	0

Name	Residence	Sub- scriptions.		
		£	s.	d.
*Calley, Major-Gen. T. C. P., C.B., M.V.O. . . . .	Burderop Park, Swindon . . . .	2	0	0
Calley, Miss . . . . .	Burderop Park, Swindon . . . .	1	0	0
†Calmady-Hamlyn, Miss . . . .	Pearroc Vean, Buckfast, S. Devon . .			
Calvert, Mrs. C. M. L. . . . .	Banwell Castle, Banwell, Somerset .	1	0	0
Calvert, H. . . . .	Bourne Place, Hildenborough, Kent .	1	1	0
†Campbell, C. H. . . . .	Park House, Over Stowey, Bridg- water . . . . .			
Campbell, J. . . . .	31, St. Albans Road, Swansea . . . .	1	0	0
Candy, T. C. . . . .	Woolcombe, Cattistock, Dorset . . .	1	0	0
Canford Schools . . . . .	Hillsborough Farm, Canford Magna, Dorset . . . . .	1	0	0
Capel, A. . . . .	Balland Lodge, Wiveliscombe, Som. .	1	1	0
Capper, Lt.-Col. A. S., D.S.O.	Langley House, Wiveliscombe, Somerset . . . . .	1	1	0
Carew, C., M.P. . . . .	Collipriest, Tiverton . . . . .	1	0	0
Carew, Mrs. P. . . . .	Chuba Tor, Yelverton, S. Devon . . .	1	0	0
Carleton, Guy . . . . .	6, Audley Square, London . . . . .	1	0	0
Carrington, H. B. . . . .	Blacklands, Crowhurst, Sussex . . .	1	0	0
†Carter, E. . . . .	East Upton, Ryde, Isle of Wight . . .			
Carter, J. & Co. . . . .	Raynes Park, London, S.W. . . . .	1	0	0
Cartwright, T. G. . . . .	30, Beaufort Gardens, London, S.W. .	1	0	0
†Cary, John . . . . .	The Priory, Shepton Mallet . . . . .			
†Cary, W. H. . . . .	Junior Constitutional Club, Piccadilly, London, W.1. . . . .			
Castleman, E. W. F. . . . .	Chettle, Blandford, Dorset . . . . .	1	0	0
Cataline Co. (Ld.) . . . . .	Bristol . . . . .	1	0	0
Cattybrook Brick Co. (Ld.) . . .	9 & 11, St. Stephen's Street, Bristol .	1	0	0
Cave, Captain A. L. . . . .	Sherwood, Newton St. Cyres, Exeter .	1	0	0
Cave, Sir C. H., Bart . . . . .	Sidbury Manor, Sidmouth . . . . .	1	0	0
Cave, E. C. . . . .	Pacombe, Sidford, Sidmouth, Devon . . . . .	1	0	0
Cave, Mrs. E. C. . . . .	Pacombe, Sidford, Sidmouth, Devon . . . . .	1	1	0
Cecil, Lt.-Col. R. E., D.S.O. . .	Passford House, Lymington, Hants. .	1	0	0
Chamberlain, T. A. . . . .	Belmont House, Flax Bourton, Som. .	1	0	0
Chester, J. & Co. . . . .	York House, Newmarket . . . . .	1	0	0
†Chick, J. H. . . . .	Wynford Eagle, Maiden Newton, Dorset . . . . .			
†Chick, W. D. . . . .	Compton Valence, Dorchester . . . .			
Chidgey, H. . . . .	Plume of Feathers Hotel, Minehead .	1	1	0
Chillingworth, C. A. . . . .	Barton Farm, Siddington, Ciren- cester . . . . .	1	0	0
Chivers and Son . . . . .	Histon, Cambridge . . . . .	1	0	0
Christian, E. . . . .	Otterbourne House, nr. Winchester .	1	0	0
Chubb, Sir C., Bart. . . . .	Bapton Manor, Codford, Wilts . . .	1	0	0
Churchill, Viscount, G.C.V.O.	Carlton Club, Pall Mall, London, S.W.1 . . . . .	1	0	0
†Churchward, F. . . . .	Hill House, Stoke Gabriel, near Totnes . . . . .			
Clare, A. J. . . . .	Beach House, Wells . . . . .	1	1	0



Name.	Residence.	Sub- scriptions.		
		£	s.	d.
*Clarendon, Earl of	.. Pitt House, Hampstead, London, N.W.3 .. .. .	2	2	0
Clark, H. .. ..	.. Keward House, Wells .. .. .	1	0	0
Clark, Hugh B. .. ..	.. Butleigh, Glastonbury .. .. .	1	0	0
Clark, H. J. .. ..	.. Oldner House, Chipping Norton, Oxon. .. .. .	1	0	0
†Clark, J. J. .. ..	.. Goldstone Farm, Hove, Sussex (Hon. Local Sec., 1885).. .. .	..	..	..
†Clarke, C. S. .. ..	.. Tracy Park, near Bath .. .. .	..	..	..
Clarke, J. W. .. ..	.. Bridwell, Cullompton .. .. .	1	0	0
Clarke, R. A. & Sons	.. Manor Farm, Chiselborough, Stoke- under-Ham .. .. .	1	0	0
Clatworthy, E. .. ..	.. Cutsey, Trull, Taunton .. .. .	1	1	0
†Clatworthy, W. B. .. ..	.. Cutsey, Taunton .. .. .	..	..	..
*Clifden, Viscount .. ..	.. Lanhydroc, Bodmin .. .. .	2	0	0
Clifford, E. G. .. ..	.. Manley Farm, Quenington, Ciren- cester .. .. .	1	0	0
Clifton Brown, E. .. ..	.. Burnham Grove, Burnham, Bucks	1	1	0
Clinton, Lord. . . .	.. Heanton Satchville, Dolton, N. Devon .. .. .	1	0	0
Cobb, R. .. ..	.. Watlynge, near Rochester.. .. .	1	0	0
†Cochrane, G. .. ..	.. Athelhampton, Dorchester .. .. .	..	..	..
†Cochrane, Mrs. G. .. ..	.. Athelhampton, Dorchester .. .. .	..	..	..
*Coldwell, Major R. C.	.. Spring Grove, Milverton, Somerset	2	0	0
Colebrook, H. J. .. ..	.. Fulmer Hall, Fulmer, Bucks .. .. .	1	0	0
Coleridge, Lord .. ..	.. The Chanter's House, Ottery St. Mary, Devon .. .. .	1	0	0
Collet, Sir Mark, Bart.	.. St. Clare, Kemsing, Sevenoaks .. .. .	1	0	0
Collins, J. S. .. ..	.. St. George's Lodge, Oldfield Park, Bath .. .. .	1	1	0
Colman, Sir J., Bart.	.. Gatton Park, Surrey .. .. .	1	0	0
Colmer, Jas. (Ld.) .. ..	.. Union Street, Bath .. .. .	1	0	0
Colville, H. K. .. ..	.. Bowden Hall, Gloucester .. .. .	1	0	0
Combes, D. .. ..	.. Dinton, Salisbury .. .. .	1	0	0
Conacher, Murray .. ..	.. The Royal Farms, Windsor .. .. .	1	0	0
Cook, R. .. ..	.. Woodhayes, Tiverton .. .. .	1	0	0
Cooper, Sir G., Bart	.. Hursley Park, Winchester .. .. .	1	0	0
Cope, Major Sir W. .. ..	.. Southerndown, Glam. .. .. .	1	1	0
Corbett, E. W. M. .. ..	.. Bute Estate Office, Cardiff .. .. .	1	1	0
Cornish, Dr. .. ..	.. Pixford, Taunton .. .. .	1	0	0
†Cornwallis, Lord, C.B.E., D.L.	.. Linton Park, Maidstone .. .. .	..	..	..
Cory, Sir Clifford J., Bart., D.L. . . . .	.. Llantarnam Abbey, Mon. .. .. .	1	0	0
Cory-Wright, Miss B. G. .. ..	.. Norcott Hill, Berkhamsted, Herts	1	0	0
Coryton, Capt. J. T. .. ..	.. Pentillie Castle, St. Mellion .. .. .	1	0	0
†Cotterell, Sir J. R. G., Bart.	.. Garnons, Hereford .. .. .	..	..	..
Coultrip, A. W. .. ..	.. Norwood Manor, Eastchurch, Kent	1	0	0
†Courage, Raymond. . . .	.. Shenfield Place, Brentwood, Essex	..	..	..
Courtenay, Capt. P. D. A. .. ..	.. Greenlawn, Burnham-on-Sea, Somerset .. .. .	1	1	0

# Subscriptions.

clxxxv

Name.	Residence	Sub- scriptions.		
		£	s.	d.
Courthorpe, Col. Sir G. L., Bart., M.P. . . . .	Whiligh, Sussex . . . . .	1	0	0
Cowie, G. A. (United Potash Co., Ltd.) . . . . .	112, Fenchurch Street, London, E.C.3 . . . . .	1	0	0
Cowlin, Frank N. . . . .	Rodborough House, Sneyd Park, Bristol . . . . .	1	0	0
Cox, S. V. . . . .	Pwlpen Farm, Bishpool, Newport, Mon. . . . .	0	10	0
Cox & Sons . . . . .	47, City Road, Cardiff . . . . .	1	0	0
Cramond, H. . . . .	York Street Wine Vaults, Bath . . . . .	1	0	0
Crawford, H. W. . . . .	Lloyd's Bank Chambers, Swansea . . . . .	1	0	0
Criddle, A. M. B. . . . .	Worle, Weston-super-Mare . . . . .	1	0	0
Cridlan, J. J. . . . .	Maisemore Park, Gloucester . . . . .	1	0	0
Crosby H. . . . .	Nether Stowey, Bridgwater . . . . .	1	1	0
*Cross, Carlton . . . . .	Wyke Hall, Gillingham . . . . .	2	0	0
Crowther, F. C. (Co-op. Whole- sale Society) . . . . .	1, Balloon Street, Manchester . . . . .	1	0	0
Crumpler, J. . . . .	Longlands, North Coker, Yeovil . . . . .	1	1	0
Crutchley, P. E. . . . .	Limminghill Lodge, Ascot . . . . .	1	0	0
Cumber, W. J. . . . .	Theale, Berks . . . . .	1	0	0
Cuming, Edwin J. . . . .	Langhill, Moretonhampstead, Devon . . . . .	1	0	0
Cundall, Capt. C.E., R.N. . . . .	Fairlawn, Parry's Lane, Stoke Bishop, Bristol . . . . .	1	0	0
Cundall, H. M., I.S.O., F.S.A. . . . .	4, Marchmont Gardens, Richmond Hill, Surrey . . . . .	1	0	0
Currie, L. . . . .	Minley Manor, Farnborough, Hants. . . . .	1	0	0
†Daniel, H. T. . . . .	The Red House, Cannington, Bridgwater . . . . .	1	0	0
Darby, E. . . . .	Liscombe, Dulverton . . . . .	1	0	0
†Darell, D. . . . .	Hillfield House, Stoke Fleming, near Dartmouth . . . . .	1	0	0
†Daresbury, Lord . . . . .	Walton Hall, Warrington . . . . .	1	0	0
Dartington Hall (Ltd.) . . . . .	Dartington, Totnes, Devon . . . . .	1	0	0
Davey, Sleep & Co. (Ltd.) . . . . .	Excelsior Plough Works, Plymouth . . . . .	1	0	0
Davey Capt. R.E. . . . .	The Mount, Newton St. Loe, Somerset . . . . .	1	1	0
†Davey, T. R. . . . .	Wraxall Court, near Bristol . . . . .	1	0	0
David & David . . . . .	11, Cathedral Road, Cardiff . . . . .	1	0	0
*†Davies, Maj.-Gen. G.F., M.P. . . . .	Leigh House, Chard, Somerset . . . . .	1	0	0
Davis, H. W. . . . .	Goldsborough Farm, Sutton Montis, Yeovil, Somerset . . . . .	1	0	0
Davis, Col. W. N. . . . .	Brookside, Salt Hill, nr. Slough, Bucks . . . . .	1	1	0
Daw, J. E. . . . .	4, Louisa Terrace, Exmouth . . . . .	1	1	0
Dawnay, Major-Gen. G F . . . . .	Longparish House, Whitechurch, Hants. . . . .	1	0	0
Dawson, C. F. . . . .	14, Henleaze Road, Westbury-on- Trym, Bristol . . . . .	1	0	0
Dawson, Miss N. . . . .	Holne Park, Ashburton, S. Devon . . . . .	1	0	0

	Residence.	Subscriptions.		
		£	s.	d.
Day, J. . . . .	Ston House, East Pennard, Shepton Mallet . . . . .	1	1	0
Day & Sons (Ld.) . . . .	Crewe . . . . .	1	0	0
Day, Son & Hewitt (Ld.) . . . .	22, Dorset Street, London, W.1 . . . . .	1	0	0
*†Debenham, E. R. . . . .	Briantspuddle, Dorchester . . . . .			
Debenham, H. B. . . . .	Manor House, Glanvilles Wootton, Sherborne, Dorset . . . . .	1	0	0
†Delme-Radcliffe, Lt.-Col.				
A., D.S.O. . . . .				
De Rothschild, Mrs. L. . . . .	Exbury, Southampton . . . . .	1	0	0
Denning & Co. . . . .	Chard, Somerset . . . . .	1	0	0
Dennis, S. . . . .	Latton, Cricklade, Wilts . . . . .	1	0	0
†Devas, H. G. . . . .				
Devenish, H. N. . . . .	Little Dunford, Salisbury . . . . .	1	0	0
Diabolo Separators (Ld.) . . . .	31-35, Bevenden Street, Hoxton, London, N. . . . .	1	0	0
Dickinson, W. F. . . . .	Kingweston, Taunton . . . . .	1	0	0
Dickson & Robinson . . . . .	Cathedral Street, Manchester . . . . .	1	1	0
*†Digby, Major, The Lord D.S.O., M.C. (Coldstream Guards) . . . . .				
	Minterne, Cerne Abbas . . . . .			
Digby, Major F. J. B. Wingfield, D.S.O. . . . .	Sherborne . . . . .	1	0	0
Dinam Estates Co. . . . .	The Offices, Llandinam, Montgomery . . . . .	1	0	0
†Dixon, Oliver . . . . .	Crescent House, Reading . . . . .			
†Dobson, H. V. . . . .	Bath and County Club, Bath . . . . .			
Dorman, C. I. Paget . . . . .	Brockley Court, Brockley, Flax Bourton . . . . .	1	0	0
Dormer, C. W. C. . . . .	Rousham, Oxford . . . . .	1	0	0
Dorse, E. G. . . . .	Trull, Taunton . . . . .	1	0	0
Drew W. (Harrison, McGregor & Co.) . . . . .	Albion Iron Works, Leigh, Lancs. . . . .	1	0	0
Drummond, Sir Dudley W., K.B.E. . . . .	Cawdor Estate Office, Carmarthen . . . . .	1	0	0
Duckworth, Major A. C. . . . .	Orchardleigh Park, Frome . . . . .	1	0	0
Dulverton, Lord . . . . .	Batsford Park, Moreton-in-Marsh, Glos. . . . .	1	0	0
Dunkel, W. . . . .	Fernhill Park, Windsor Forest . . . . .	1	0	0
Dunlop, I. M. . . . .	Avonhurst, Sneyd Park, Bristol . . . . .	1	0	0
Dunlop, J. (British Basic Slag (Ld.) . . . . .	Wellington House, Buckingham Gate, London, S.W.1 . . . . .	1	0	0
Eagle Range and Gas Stove Company (Ld.) . . . . .				
	Catherine St., Aston, Birmingham . . . . .	1	0	0
*Earl, H. F. . . . .	Fontmell Magna, Shaftesbury . . . . .	2	0	0
Eason, J. T. . . . .	Woodhouse Farm, Imannel, Andover, Hants . . . . .	1	0	0
*†Eastwood, J. E. . . . .	Middleham, Ringmer, Lewes . . . . .			

Name.	Residence.	Subscriptions.		
		£	s.	d.
Economic Fencing Company (Ld.) (Dulcken, H. E.) ..	Billiter House, Billiter Street, London, E.C.3. .. .. .	1	0	0
Eden, R. H. H. .. ..	Heytesbury, Wilts. .. ..	1	0	0
Edgell, W. & A. .. ..	Radstock, Bath .. .. .	1	0	0
†Edmondson, A. .. ..	Woodcote, Silverdale, Lancashire ..			
Edwards, A. P. .. ..	Gog's House, Wedmore, Somerset ..	1	1	0
Edwards, Lt.-Col. C. W. (Spillers, Ld.) .. ..	40, St Mary Axe, London, E.C.3 ..	1	0	0
Edwards, Capt. D. .. ..	Home Farm, Barrow Gurney, Somerset .. .. .	1	0	0
Edwards, W. H. G. . . .	Butcombe Court, Wington .. ..	1	0	0
*Edwards-Ker, Lieut.-Col. D. R., O.B.E., M.A. ..	Principal, Seale Hayne Agricul- tural College, Newton Abbot ..	2	0	0
Eldridge, Pope & Co. ..	Dorchester .. .. .	1	0	0
Elton, Sir A., Bart. .. ..	Clevedon Court, Clevedon, Som. . .	1	0	0
Elton, B. A. . . . .	Langford, near Bristol .. ..	1	0	0
Elwes, Lt.-Col. H. C., D.S.O., M.V.O. .. .. .	Colesborne, Cheltenham .. ..	1	1	0
Elworthy, W. R. .. ..	Southmead, Monkton, Dorchester ..	1	0	0
Errington, R. .. ..	Victoria Mills, Sunderland .. ..	1	0	0
Erskine, Lord, M.P. . .	Charlton, near Bristol .. ..	1	0	0
Esdaile, W. C. H. .. ..	Cothelstone House, Taunton .. ..	1	0	0
Eustice, G. H. .. ..	Bezurrell, Gwinear, Hayle, Cornwall	1	0	0
Evans, Councillor J. ..	5, Crescent Gardens, Bath. . . .	1	0	0
Evans, T. .. .. .	Highfield, Sketty, Glam. .. ..	1	0	0
†Eve, Mr. Justice .. ..	Royal Courts of Justice, London, W.C.2 .. .. .			
Evelyn, Mrs. . . . .	Wotton House, near Dorking .. ..	1	0	0
Everard, W. L., M.P. ..	Ratcliffe Hall, Leicester .. ..	1	0	0
Fairweather, E. D. .. ..	Manor House, Waltham St. Lawrence, Berks .. .. .	1	0	0
*†Falmouth, Viscount ..	Tregothnan, Truro .. .. .			
†Fane, J. Onslow .. ..	Steventon Manor, Steventon, Basingstoke .. .. .			
Fane, Major N. H. .. ..	Boyton Manor, Codford, Wilts ..	1	0	0
†Farwell, Major E. W. ..	Hylton Estate Office, Kilmersdon, Bath .. .. .			
Fastnut (Ld.) .. .. .	17, Newnham Road, Wood Green, London, N.22 .. .. .	1	0	0
Faudel-Phillips, Major H. ..	Badbury Wick, Swindon .. ..	1	0	0
Fenwick, M. .. .. .	Abbotswood, Stow-on-the-Wold ..	1	0	0
*Ferguson-Davie, Sir W. J., Bt. . . . .	Creedy Park, Crediton .. ..	2	0	0
Ferriman, W. R. .. ..	Home Farm, Ashton Court Estate, near Bristol .. .. .	1	0	0
Ferris, T. H. S. .. ..	4, Market Place, Devizes .. ..	1	0	0
Fewtrell, O. J. .. ..	Estate Office, Wells .. .. .	1	0	0
ffennell, Col. R. .. ..	Wytham, Oxford .. .. .	1	1	0

Name.	Residence	Subscriptions.		
		£	s	d
Firth, Capt. C. P. L. ..	Compton Durville Manor, South Petherton, Somerset ..	1	0	0
*Fitzgerald, Lady ..	Buckland, Faringdon, Berks. ..	2	0	0
FitzGerald, Mrs. M. M. ..	Marsden Manor, Cirencester ..	1	0	0
Fitzwalter, Lord ..	Goodnestone, Dover ..	1	0	0
Fitzwilliams, Col. E. C. L., C.M.G. ..	Brvnteth, Pentrecourt, Llandyssul ..	1	1	0
Fleming, Mrs. P. ..	Grendon Hall, Aylesbury, Bucks. ..	1	0	0
Flemming, Lt.-Col. Gordon ..	Norton Beauchamp, Kewstoke, Somerset ..	1	1	0
Fletcher, Capt. A. M. T. ..	Margam Park, Port Talbot ..	1	0	0
Fodens (Ld.) ..	Sandbach, Cheshire ..	1	0	0
Ford, R. ..	Hartheld, Cotham Park, Bristol ..	1	0	0
*†Forester, Capt. F. W. ..	Hurecot House, Salisbury ..	..	..	..
Forshaw, Dr. W. H. ..	Slythchurst, Ewhurst, Guildford ..	1	0	0
†Fortescue, J. B. ..	Bocconnoc, Lostwithiel, Cornwall ..	..	..	..
Fortune, R. ..	Newhouse, Cranleigh, Surrey ..	1	0	0
Four Oaks Spraying Machine Co. (Ld.) ..	Four Oaks Works, Sutton Coldfield ..	1	0	0
Fowler, John & Co. (Leeds) Ld. ..	Leeds ..	1	0	0
Fox, Brothers & Co. ..	Wellington, Somerset ..	1	1	0
Fox, Mrs. A. ..	Brislington House, near Bristol ..	1	0	0
Fox, C. L. ..	Rumwell Hall, Taunton ..	1	0	0
Fox, J. H. ..	Robins Close, Wellington, Somerset ..	1	1	0
Fox, R. A. ..	Yate House, Yate, Glos. ..	1	1	0
Francis, F. S. ..	Wilkinthroop, Templecombe ..	1	1	0
French, Col. C. N., C.M.G., C.B.E. ..	Fitz House, Teffont Magna, Salisbury ..	1	0	0
French, W. T. & Son ..	St. Mary Street, Ladywood, Birmingham ..	1	0	0
Friker, J., Junr. ..	Bridge Close Farm, Hardington, Yeovil ..	1	0	0
Fry, A. M. ..	8, Zion Hill, Clifton, Bristol ..	1	1	0
Fry, C. A. H. ..	Ashton Lodge, Long Ashton, Bristol ..	1	0	0
Fry, Mrs. C. Harrington ..	Ashton Lodge, Long Ashton, Bristol ..	1	0	0
Fry, H. A. ..	Monmouth Place, Bath ..	1	1	0
*Fry, J. S. & Son (Ld.) ..	Union Street, Bristol ..	2	2	0
Fryer, W. J. ..	Holme Park, Sonning, Berks ..	1	1	0
*Fuller, Major R. F. ..	Great Chalfield, Melksham, Wilts ..	2	0	0
Fuller, Mrs. R. F. ..	Great Chalfield, Melksham, Wilts ..	1	0	0
Fuller, S. & A. ..	Bath ..	1	0	0
Gale, G. ..	The Grove, Winterbourne, near Bristol ..	1	0	0
Gardiner, Sons & Co. ..	Nelson Street, Bristol ..	1	1	0
Garne, W. ..	Aldsworth, Northleach ..	1	1	0
Garnett, W. ..	Backwell Hill House, West Town, R.S.O., Somerset ..	1	0	0
Garton, J. A., M.C. ..	Pyllie Manor, Shepton Mallet, Somerset ..	1	0	0

Name.	Residence.	Subscriptions.	
		£	s. d.
Garton, R. V. . . . .	Langbourne, Blandford, Dorset . .	1	0 0
Gee, George . . . . .	Mayford House, Mayford, nr. Woking . .	1	0 0
George, P. . . . .	Hill Side, Barrow Gurney, Bristol . .	1	0 0
Gibbins, T. . . . .	Glynfein, Neath . . . . .	1	0 0
†Gibbs, Major A. H. . . . .	Pytte, Clyst St. George, Exeter . .	..	..
†Gibbs, Mrs. . . . .	Pytte, Clyst St. George, Exeter . .	..	..
Gibbs, Lt.-Col. W. O. . . . .	Barrow Court, Flax Bourton, Somerset . . . . .	1	0 0
†Gibbs, Mrs. W. O. . . . .	Barrow, Court, Flax Bourton, Somerset . . . . .	..	..
†Gladstone, J. . . . .	Bowden Park, Chippenham . .	..	..
Gladstone, T. H. . . . .	Eastcote Grange, Hampton-in- Arden . . . . .	1	0 0
Glancely, Lord . . . . .	Lackham, Lacock, Wilts. . . . .	1	0 0
Glencross, T. . . . .	The Chestnuts, Seagry, Chippenham . .	1	0 0
Glico Petroleum (Ld.) . . . . .	Alexandra House, Queen Square, London, W.C.1 . . . . .	1	0 0
Glover, J. H. . . . .	Cornwood, S. Devon . . . . .	1	0 0
Glyde, J. Chaffey . . . . .	Holmfield, Portishead . . . . .	1	0 0
Glyn, Capt. Sir R. F., Bart., D.S.O. . . . .	Gaunts House, Wimborne, Dorset . .	1	0 0
Godfrey, J. B. . . . .	Downside Farm, Shepton Mallet . .	1	0 0
†Godman, C. B. . . . .	Woldingfold, Horsham . . . . .	..	..
Godman, J. . . . .	The Raswells, Hascombe, God- alming . . . . .	1	0 0
Godwin, Warren and Co., (Ld.) . . . . .	140, Redcliffe Street, Bristol . .	1	0 0
Goldsmith, J. . . . .	Blendworth, Horndean, Cosham, Hants . . . . .	1	0 0
Goodman, A. & Sons . . . . .	3, Hammett Street, Taunton, and Broad St. House, London, E.C. . .	1	0 0
*Gordon, Major R.G.S., M.C. . . . .	Langton House, Blandford . .	2	0 0
Gosling, R. H. . . . .	Hawthorne Hill, Bracknell . .	1	0 0
Gough, Major G. . . . .	13, Grosvenor Place, London, S.W.1 . .	1	0 0
Graham-Clarke, Capt. J. E. H. . . . .	Frocester Manor, Stonehouse, Glos. . .	1	0 0
Grant-Ives, C. E. . . . .	Bradden House, Towcester, North- amptonshire . . . . .	1	0 0
Gray, J. G. . . . .	Rosehill, Coventry . . . . .	1	0 0
Greaves, R. M. . . . .	Wern, Portmadoc, North Wales . .	1	0 0
Green, A. W. . . . .	Stoke Abbey Farm, Stoke Bishop, Bristol . . . . .	1	0 0
Green, H. . . . .	Tanyard Farm, Oakhill, Bath . .	1	0 0
†Green, Major H. L. . . . .	The Hall, Paulton Lanulyn, Bromborough, Cheshire . . . . .	..	..
†Greenall, Mrs. C. E. . . . .	The Manor, Carlton Seroop, Grantham . . . . .	..	..
Greenwell, Sir B., Bart. . . . .	Marden Park, Woldingham, Surrey . .	1	0 0
Greenwood, J. C. . . . .	Westfield Farm, Bloomfield Road, Bath . . . . .	1	0 0
Gregory, W. & Co. . . . .	Wellington, Somerset . . . . .	1	1 0

Name	Residence	Sub- scriptions		
		£	s.	d.
†Guest, Miss .. ..	Inwood, Templecombe .. ..	..	..	..
*Guilford, Earl of .. ..	Waldershare Park, Dover .. ..	2	0	0
Guille, H. C. de Stevens ..	Westleigh House, Westleigh, near Bideford, N. Devon .. ..	1	0	0
Gullick, W. F., F.R.H.S. ..	Waterloo Nursery, Salisbury .. ..	1	0	0
Gundry, H. E. B. .. ..	Melplash Court, Dorset .. ..	1	0	0
Gunn, H. S. .. ..	Henbury House, Henbury, Bristol ..	1	0	0
Gunther, C. E. .. ..	Tongswood, Hawkhurst, Kent ..	1	0	0
Gynn, R. & Son .. ..	Tresley, Camelford, Cornwall ..	1	0	0
*Hambleton, Viscount ..	Greenlands, Henley-on-Thames ..	5	0	0
*Hambro, Sir Eric, K.B.E. ..	Milton Abbey, Blandford, Dorset ..	2	0	0
Hambro, H. C. .. ..	The Lodge, Tadworth, Surrey ..	1	0	0
Hancock, C. L. .. ..	The Manor House, Cothelstone, Taunton .. ..	1	1	0
Hancock, F. C. .. ..	Ford House, Wiveliscombe, Som. ..	1	1	0
Hancock, H. C. .. ..	The Court, Milverton, Taunton ..	1	0	0
Hancock, P. F. .. ..	Quarry Cleeve, Wiveliscombe, Somerset .. ..	1	1	0
Hancock, Mrs. M. F. H. ..	Halse, Taunton .. ..	1	0	0
Hanley, Dr. J. A. .. ..	Royal Agricultural College, Cirencester .. ..	1	0	0
Harding, E. G. .. ..	Foxcote, Grittleton, Chippenham ..	1	0	0
Hardwick, A. .. ..	Easton-in-Gordano, Bristol .. ..	1	0	0
Hare, Lady K. F. .. ..	Brokenhurst Park, Hants .. ..	1	0	0
Hargreaves, J. .. ..	The Priory, Royston, Herts .. ..	1	0	0
†Harper, K. J. .. ..	Ozleworth Park, Wotton-under- Edge, Glos. .. ..	..	..	..
Harris, H. .. ..	Singleton Park Farm, Sketty, S.O., Glam. .. ..	1	0	0
Harrison, D. .. ..	The Grove, Tenby .. ..	1	0	0
Harrison, McGregor & Co. ..	Leigh, Lancashire .. ..	1	0	0
†Harrison, Lt.-Col. W. E. ..	Wychmor Park, Burton-on-Trent ..	..	..	..
Harrison, T. D. .. ..	Albion Iron Works, Leigh, Lancs. ..	1	0	0
Hart, A. .. ..	"Risingholme," Heathfield Tower, Sussex .. ..	1	0	0
Harvey, I. H. .. ..	Elmdale, Long Ashton .. ..	1	0	0
Harvey, R. D. .. ..	The Woodlands, Congresbury, Som. ..	1	0	0
Haskell, H. .. ..	Watsons, Belsford, Harberton, Devon .. ..	1	0	0
Haslam, Mrs. .. ..	St. Albans, Weston Park, Bath ..	1	0	0
Hassard, Miss K. M. ..	Redford Bungalow, Peasmarsh, Sussex .. ..	1	0	0
Hawker, Capt. H. G. ..	Strode, Ermington, Ivybridge ..	1	0	0
Hawkes & Son .. ..	32, East Street, Taunton .. ..	1	1	0
†Haydon, Lt.-Col. W. H. ..	Maidford, Malmesbury, Wilts ..	..	..	..
Hayes-Sadler, Mrs. ..	Horne Court, Horne, Horley, Surrey ..	1	0	0
Hayes, G. C. .. ..	The Greenway, Shurdington, Chel- tenham .. ..	1	0	0
Haynes, R. P. .. ..	Delves Green Farm, Wednesbury ..	1	0	0
Hayward, Mrs. Victor ..	Bookham Grove, Bookham, Surrey ..	1	0	0

# Subscriptions.

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Name	Residence	Sub- scriptions		
		£	s.	d.
Helvar, Comm. K. C., D.S.O.	Poundesford, Taunton .. ..	1	0	0
*†Henderson, Lieut.-Col.				
Hon. H. G. .. ..	Buscot Park, Faringdon, Berks. ..			
Heneage-Vivian, Rear Admiral				
Walter .. ..	Parc le Breos, Penmaen, Glam. ..	1	0	0
Henry, Lt.-Col. F. .. ..	Elmstree, Tetbury .. ..	1	0	0
Heseltine, Lt.-Col. J. E. N...	Hawking Down Farm, Hindon, Salisbury .. ..	1	0	0
Hesse, F. W. .. ..	Weston Hill, Weston Park, Bath	1	0	0
*Hewthorn & Co. .. ..	7, Lambs Passage, Chiswell Street, London. E.C.1 .. ..	2	0	0
Heyworth-Savage, Lieut.-Col.				
C. .. ..	Bradwell Grove, Burford, Oxon ..	1	0	0
*Hickling, A. W. .. ..	30, Holland Villas Road, Kensing- ton, London, W. .. ..	2	2	0
Hicks-Beach, Lady Susan	Coln S. Aldwyn, Fairford, Glos. ..	1	0	0
Higgins, B. .. ..	Millhouse Farm, Everereech ..	0	10	0
Hignett, G. .. ..	Hodshill, Southstoke, Bath ..	1	1	0
Hignett, Mrs. G. .. ..	Hodshill, Southstoke, Bath ..	1	1	0
Higson, Howard .. ..	Lufton Manor, Yeovil .. ..	1	0	0
†Hill, B. H. .. ..	Uphill, Weston-super-Mare ..			
Hill, C. L. .. ..	Harptree Court, East Harptree, near Bristol .. ..	1	0	0
Hill, F. C. G. .. ..	Broome Manor, Swindon .. ..	1	0	0
Hill, H. .. ..	Paulton, near Bristol .. ..	1	1	0
Hill, H. W. .. ..	High Street, Newmarket ..	1	0	0
Hill, M. Ll. .. ..	Woodspring Priory, Weston-super- Mare .. ..	1	0	0
Hill, S. .. ..	Langford House, Churchill, Bristol	1	0	0
Hill, Major V. T. .. ..	Woodspring Priory, near Weston- super-Mare .. ..	1	1	0
Hill, W. J. R. .. ..	Kingshill Brickworks, Swindon ..	1	0	0
†Hinckes, Captain R. T. ..	Mansel Court, Mansel Lacey, Hereford .. ..			
Hippisley & Sons .. ..	Wells, Somerset .. ..	1	0	0
Hippisley, R. J. B. .. ..	Ston Easton Park, Bath .. ..	1	0	0
Hiscock, Victor .. ..	France Farm, Blandford .. ..	1	1	0
†Hoare, Sir H. H. A., Bart	Stourhead, Zeals, S.O., Wilts ..			
Hobhouse, A. L. .. ..	Hadspen House, Castle Cary, Somt.	1	0	0
Hobhouse, Sir Charles, Bart.	Monkton Farleigh, Bradford-on- Avon, Wilts .. ..	1	0	0
†Hobhouse, R. A. .. ..	Pondmead, Oakhill, Somerset ..			
*Hobhouse, Rt.-Hon. H. ..	Hadspen House, Castle Cary ..	2	0	0
†Hoddinott, S. .. ..	Dean Vale, West Cranmore, Shepton Mallet .. ..			
Hoffman, P. .. ..	4, Cardigan Mansions, Richmond Hill, London, S.W. .. ..	1	0	0
Holbeck, R. H. A. .. ..	Farnborough Grange, Banbury ..	1	0	0
†Holdsworth, H. M. .. ..	104, Alexander Rd., Parkstone, Dorset .. ..			



Name.	Residence.	Sub- scriptions.		
		£	s.	d.
Holloway, H. T. .. ..	West Lavington Estate Office, Littleton-Panell, Wilts .. ..	1	0	0
Holmes, Carl .. ..	Clover Top Farm, Welwyn, Herts. ..	1	0	0
Holmes, Mrs. F. J. .. ..	Middleton Stoney, Bicester, Oxon ..	1	1	0
Holt Needham, O. N. .. ..	Burdocks, Fairford, Gloucester ..	1	0	0
Hood, Capt. A. O. .. ..	Buckhill House, Calne .. ..	1	0	0
Horbury, W. L. .. ..	Ettington Park, Stratford-on-Avon ..	1	0	0
Horne, H. S. .. ..	Aldsworth, Emsworth, Hants ..	1	0	0
Horridge, J. .. ..	Plas Llanfair, Llanfair P.G., Anglesey ..	1	0	0
Hort, J. F. .. ..	Church Farm, North Stoke, nr. Bath ..	1	0	0
Horton-Starkie, Rev. Preb. Le G. G. .. ..	Wellow Vicarage, Bath .. ..	1	1	0
Hosegood, R. G. .. ..	Aller Farm, Williton, Somerset ..	1	1	0
Hosking, W. L. .. ..	Fentongollan, Probus, Cornwall ..	1	0	0
Hoskins, T. C. .. ..	Manor Farm, Hemington, Bath ..	1	0	0
Hoskyns, H. W. W. .. ..	The Manor, North Perrott, Crewkerne .. ..	1	0	0
Hotson, H. S. (WolseleySheep Shearing Mach. Co. (Ld.) ..	Alma Street, Birmingham .. ..	1	0	0
House, J. .. ..	"Walkers," Boro'bridge, Bridgwater ..	1	0	0
Howard, A. H. S. .. ..	Thornbury Castle, Gloucester ..	1	0	0
Howard, J. & F. .. ..	Bedford .. ..	1	0	0
†Hughes, A. E. .. ..	The Laurels, Bargates, Leominster ..			
Humphries, Sir Sidney, J.P.	Eastfield Lodge, Westbury-on- Trym, Bristol .. ..	1	1	0
Hunloke, Lady .. ..	Cowbridge, Malmesbury, Wilts ..	1	1	0
Hunt, F. W. .. ..	37, Baldwin Street, Bristol ..	1	0	0
Hunter, Capt. T. .. ..	Larkbeare, near Honiton ..	1	0	0
Huntington, Major A. W. ..	Wellesbourne House, Warwick ..	1	0	0
Hurditch, J. A. .. ..	Shipway Gate Farm, Portbury, Bristol .. ..	1	0	0
Hurle, Major J. A. Cooke ..	Ashburton, Devon .. ..	1	1	0
Hurst & Son .. ..	152, Houndsditch, London, E.1 ..	1	0	0
†Hylton, Lord .. ..	Ammerdown, Radstock .. ..			
*Ilchester, Earl of .. ..	Melbury, Dorchester .. ..	2	2	0
Iles, D. .. ..	Lyegrove, Badminton .. ..	1	0	0
Imbert-Terry, Capt. F.B. M.C.	Blue Hayes, Broadclyst, Devon ..	1	0	0
Imbert-Terry, Mrs. L. .. ..	Blue Hayes, Broadclyst, Devon ..	1	0	0
Inman, A. E. .. ..	Chandos Road, Redland, Bristol ..	1	1	0
International Harvester Co. (Ld.) .. ..	Harvester House, 259, City Road, E.C.1 .. ..	1	0	0
Inwood, H. C. .. ..	Ridgemoor, Burghclere .. ..	1	0	0
Ismay, Mrs. .. ..	Iwerne Minster, Blandford, Dorset ..	1	0	0
Jackman, Percy .. ..	Pulteney Hotel, Bath .. ..	1	0	0
Jackson, Sir Henry Mather Bt., C.B.E. .. ..	St. Mary's Hill, Abergavenny, Mon. ..	1	0	0
Jagger, Capt. F. W. .. ..	Badbury Wick House, Chiseldon, Swindon .. ..	1	0	0

Name.	Residence.	Sub- scriptions.
		£ s. d.
James, A. . . . .	Totterdown, Bristol . . . . .	1 0 0
James, H. G. . . . .	Priory Farm, Portbury, Somerset . . . . .	1 0 0
James, Mark . . . . .	Home Farm, Ston Easton, Bath . . . . .	1 0 0
Jeffery, A. & Co. . . . .	70, High St., Walthamstow, London . . . . .	1 0 0
Jeffery, F. R. . . . .	Park Hill, Ipplepen, Newton Abbot . . . . .	1 0 0
Jenkins, Capt. E. . . . .	Netherleigh, Hayle, Cornwall . . . . .	1 0 0
Jenkins, H. W. . . . .	c/o F. Capern, Lewin's Mead, Bristol . . . . .	1 0 0
Jenkins, T. E. . . . .	Kilyrough Home Farm, Park Mill, S.O., Glamorgan . . . . .	1 0 0
Jenkins, Captain Vaughan . . . . .	St. Winifreds, Combe Down, Bath . . . . .	1 0 0
†Jervoise, Mrs. B. A. L. . . . .	Herriard Park, Basingstoke . . . . .	.. ..
Jervoise, Major F. H. T. . . . .	Herriard Park, Basingstoke . . . . .	1 1 0
John, W. Llewellyn . . . . .	Penmount, Llanelly, Carm. . . . .	1 1 0
Johnson, L. O. . . . .	Peppers, Ashurst, Steyning, Sussex . . . . .	1 0 0
†Jones, H. G. . . . .	Downford, Mayfield, Sussex . . . . .	.. ..
Jones, H. G. P. . . . .	Hillsborough Fruit Farms, Canford, Wimborne . . . . .	1 0 0
Jones, K. S. . . . .	Norton House, West Cross, Swansea . . . . .	1 0 0
Jones & Watson . . . . .	Great Bealings House, Woodbridge, Suffolk . . . . .	1 0 0
Joyce, J. . . . .	Preston, Milverton, Somerset . . . . .	1 0 0
Joyce, Rev. W. W. . . . .	Charles Parsonage, South Molton . . . . .	1 0 0
Kane, Capt. C. J. . . . .	Kingston Russell House, Long Bredy, Dorchester . . . . .	1 0 0
Kay, Capt. . . . .	Vickwell Farm, Sidmouth . . . . .	1 1 0
Kekewich, Sir T. H., Bart. . . . .	Peamore, Exeter . . . . .	1 0 0
Kemmis, Lt.-Commr. H. W. A., R.N. . . . .	Chilworthy House, Chard, Somerset . . . . .	1 1 0
†Kemp, L. J. . . . .	Maer, Exmouth . . . . .	.. ..
Kendall, J. N. . . . .	Brimpsfield Park, Gloucester . . . . .	1 0 0
Kendall, W. G. . . . .	Yarner, Dartington, Totnes, S. Devon . . . . .	1 0 0
Kennaway, Sir J., Bart. . . . .	Escot, Ottery St. Mary . . . . .	1 0 0
Kenward, E. . . . .	Preston House, Preston-Candover, Hants . . . . .	1 0 0
Key, G. (Ld.) . . . . .	Keystone Works, Rugeley, Staffs . . . . .	1 0 0
Kidner, S., O.B.E. . . . .	Bickley, Milverton, near Taunton . . . . .	1 0 0
Kidston, G. . . . .	Hazlebury, Box, Wilts . . . . .	1 0 0
Killen, J. J. . . . .	Rood Farm, Butleigh, Glastonbury . . . . .	1 0 0
King, Mrs. A. C. . . . .	Braishfield Pony Stud, Romsey, Hants . . . . .	1 0 0
King, E. W. . . . .	Chew Magna, near Bristol . . . . .	1 0 0
King & Sons, R. . . . .	Milsom Street, Bath . . . . .	1 1 0
Kingwell, H. J. . . . .	Great Aish, South Brent, S. Devon . . . . .	1 0 0
Kirby, Mrs. J. E. . . . .	Netley Farm, Woodlands, South- ampton . . . . .	1 0 0
Knight-Bruce, R. . . . .	The Sanctuary, Shobrooke, Crediton . . . . .	1 0 0

*Subscriptions.*

	Residence.	Sub- scriptions.
		£ s. d.
Knight, H. . . . .	Apple Tree Court, Lyndhurst, Hants	1 0 0
†Knollys, C. R. . . . .	Richmond Lodge, Bath . . . . .	..
†Kruise, W. . . . .	St. Blazey, Par, Cornwall . . . . .	..
†Lake, C. . . . .	Glenthorne, Gravesend . . . . .	..
Lambert, R. E. . . . .	Roche Court, Winterslow, Wilts . . . . .	1 0 0
Lance, Brig.-Gen. F. . . . .	Wentfield, Wrotham, Kent . . . . .	1 0 0
Langford, E. W. (Ld.) . . . . .	Hereford . . . . .	1 0 0
Langman, Major Sir A. L., C.M.G. . . . .	North Cadbury Court, Yeovil, Som. . . . .	1 1 0
Las Casas, L. de . . . . .	Elliscombe House, Wincanton . . . . .	1 1 0
Las Casas, Mrs. de . . . . .	Elliscombe House, Wincanton . . . . .	1 1 0
Lawes, Algernon (Ld.) . . . . .	203, Hornsey Road, London, N.7. . . . .	1 1 0
Lawford, Capt. John . . . . .	High House, Dawlish . . . . .	1 0 0
Lawrence, Lt.-Col. the Hon.G. . . . .	Hill Farm, Oaksey, Wilts . . . . .	1 0 0
Lawrence, R. . . . .	Rull, Cullompton, Devon . . . . .	1 0 0
Lear, H. H. . . . .	Co-operative Wholesale Society, Estate Office, Cherhill, Calne . . . . .	1 1 0
Le Breton, Lt.-Col. . . . .	Loders Court, Bridport, Dorset . . . . .	1 0 0
*Le Bas, R. V. . . . .	Winsford, Taunton . . . . .	2 0 0
Leconfield, Lord . . . . .	Petworth House, Petworth, Sussex . . . . .	1 0 0
Le Sueur, A. D. C. . . . .	Forestry Commission, 22, Gros- venor Gardens, S.W.1 . . . . .	1 1 0
Leeder, E. H. . . . .	Mount Pleasant House, Swansea . . . . .	1 0 0
*Leney, A. . . . .	Little Haven, Dibden, Parlieu, Hythe, Southampton . . . . .	2 0 0
Lerwill, A. R. . . . .	Mattox Down, Eastdown, Barn- staple . . . . .	1 0 0
Leverton, W. A. . . . .	Columb John Farm, Stoke Canon, Exeter . . . . .	1 0 0
Lewis, Col. E. . . . .	23, Bathwick Hill, Bath . . . . .	1 1 0
Lindley, Hon. Walter Barry . . . . .	Corpe House, Taunton . . . . .	1 0 0
Lindley, Hon. Mrs. Walter . . . . .	Corpe House, Taunton . . . . .	1 0 0
Lipscomb, Godfrey . . . . .	Claverton Lodge, Bathwick Hill, Bath . . . . .	1 0 0
†Lister, J. J. . . . .	Falkland House, Lewes . . . . .	..
Lister, R. A. & Co. (Ld.) . . . . .	Dursley, Glos. . . . .	1 1 0
Little, Major A. C. . . . .	Upton House, Tetbury, Glos. . . . .	1 0 0
Littleton, W. J. . . . .	Holland Barton, Bodmin, Cornwall . . . . .	1 0 0
Llewellyn, G. & Son . . . . .	The Churn Works, Haverfordwest . . . . .	1 0 0
Llewellyn, Sir David R., Bart. . . . .	The Court, St. Fagans, Cardiff . . . . .	1 0 0
Llewellyn, Griffiths R. P. . . . .	.. . . .	1 0 0
Llewellyn, Capt. Llewellyn T. E. . . . .	Hackwood, Basingstoke . . . . .	1 0 0
Lloyd, A. W. . . . .	Whitechapel Manor, South Molton . . . . .	1 1 0
Loch, Col. E. H. . . . .	Parks, Crediton . . . . .	1 1 0
Locock, H. T. . . . .	4, Clifton Park, Bristol . . . . .	1 0 0
Loder, Lady . . . . .	Leonardslee, Horsham, Sussex . . . . .	1 0 0
Long, W. F. . . . .	Broadway House, Chilcompton, near Bath . . . . .	1 0 0
Longrigg, G. E. . . . .	Weston Lea, Bath . . . . .	1 0 0

# Subscriptions.

CCXCV

Name.	Residence.	Sub- scriptions.
		£ s. d.
Lonsdale, T. . . . .	Temple Grafton Court, Alcester . .	1 0 0
Loosmore, H. . . . .	Holmleigh, Cotleigh, Honiton . .	1 0 0
Lopes, Sir H. Y. Buller, Bart.	Maristow, Roborough, Devon . .	1 0 0
Loxton, A. H. . . . .	Croft Farm, Westbury-sub- Mendip, Wells . . . . .	1 0 0
Luce, R. P. . . . .	Lower Chaddlehanger, Tavistock . .	1 0 0
Luckes, S. . . . .	Bridge Street, Taunton . . . . .	1 0 0
Luckock, E. H. M. . . . .	Sidbrook House, Taunton . . . . .	1 0 0
*Luff, J. Purnell . . . . .	The Towers, Evercreech, Bath . .	2 2 0
Lupton, Miss A. . . . .	Chalmington, Dorchester . . . . .	1 1 0
†Lupton, N. D. . . . .	Chalmington, Cattistock, Dorset . .	..
†Lutley, J. H. . . . .	Brockhampton, Worcester . . . . .	..
Luttrell, Major A. C. . . . .	Lea Combe House, Axminster . .	1 1 0
Luttrell, Capt. A. F. . . . .	Court House, East Quantoxhead, Bridgwater . . . . .	1 0 0
Luttrell, Claude M. F. . . . .	Ben Mead, Box, Wilts . . . . .	1 1 0
Luttrell, G. F. . . . .	Dunster Castle, Somerset . . . . .	1 1 0
*Lymington, Viscount . . . . .	Old Manor Farm, Ellisfield, Basing- stoke . . . . .	2 0 0
*Lysaght G. L. . . . .	Chapel Cleeve, Taunton . . . . .	2 0 0
Lysley, W. J. . . . .	Castle Combe, Chippenham . . . . .	1 0 0
MacAndrew, E. G. . . . .	Pallinghurst, Baynards, Horsham . .	1 0 0
McCormick, Major K., D.S.O.,	Duchy of Cornwall Office, Bucking- ham Gate, S.W. . . . .	1 0 0
Macdonald, H. L. S. . . . .	Avondale, Bathford, Bath . . . . .	1 0 0
Macintosh, E. . . . .	Boxhill Farm, Dorking, Surrey . .	1 0 0
Macintosh, J., . . . .	The University College, Reading . .	1 0 0
McKinnon, Capt. W. D. . . . .	1, Cary Place, Fleet Street, Torquay . .	1 0 0
Mackintosh, Sir Harold . . . . .	Conyngham Hall, Knaresborough . .	1 0 0
McCracken, H. R. . . . .	Beara Farm, Pilton, Barnstaple . .	1 0 0
McWatters, Col. H. C., D.S.O.	Homewood, Hinton Charterhouse, Bath . . . . .	1 1 0
McWatters, Mrs. C. G. . . . .	Homewood, Hinton Charterhouse, Bath . . . . .	1 1 0
Malet, Col. Sir Harry . . . . .	Wilbury, Newton Tony, Salisbury . .	1 0 0
Mander, Mrs. Howard . . . . .	Trysull Manor, Wolverhampton . .	1 0 0
Mann, Col. W. H. . . . .	Bratton, Westbury, Wilts . . . . .	1 0 0
†Mansell, A. E. . . . .	Mount Vernon, Melton Mowbray, Tasmania . . . . .	..
Mansfield, T. . . . .	.. . . .	1 1 0
Mappin & Webb (Ld.) . . . . .	158, Oxford Street, London, W.1 . .	1 1 0
Mapstone, R. G. . . . .	Glastonbury . . . . .	1 0 0
Margam Estates . . . . .	Port Talbot . . . . .	1 0 0
Marsh, Lewis . . . . .	Downfield, Midford Road, Combe Down, Bath . . . . .	1 0 0
Marshall Bros. . . . .	Paramount, Ivybridge, S. Devon . .	1 0 0
Marshall, Capt. J. H. . . . .	Maiden Newton, Dorchester . . . . .	1 0 0
Marshall, L. H. . . . .	The Bridge, Godalming, Surrey . .	1 0 0
Martin, Col. . . . .	Bishops Caundle, Sherborne . . . . .	1 0 0
Martin, Mrs. . . . .	Bishops Caundle, Sherborne . . . . .	1 0 0

Name.		Residence.	Subscriptions.		
			£	s.	d.
Martin, W. P.	..	Colleton, near Chulmleigh	1	0	0
Martineau, H. M.	..	The Lodge, Holyport, Berks	1	0	0
Martineau, P. E.	..	Hillside, Cleveland Walk, Bath	1	0	0
Martyn, G.	..	Tremeddan, Liskeard, Cornwall	1	1	0
Mason, F. F.	..	Swansea	1	0	0
Massarella, A.	..	Belmont, Bentley, Doncaster	1	0	0
Massey Harris Co. (Ld.)	..	53, 54 & 55, Bunhill Row, London, E.C.1	1	0	0
Masters, A.	..	Church Farm, Rudgeway, Glos.	1	0	0
Masters, Lt.-Col. G.	..	Prescott House, Gotherington, near Cheltenham	1	0	0
Matthews, H.	..	Winterbourne, Bristol	1	0	0
*Matthew, R. W.	..	Adsborough House, nr. Taunton	2	2	0
Maunder, J.	..	Kingweston, Somerton	1	0	0
Maunder, L. J.	..	Butleigh, Glastonbury	1	0	0
Maundrell, S. W.	..	Lushill Farm, Highworth	1	0	0
Mawby, T.	..	Merryweather & Sons, Greenwich, London	1	0	0
May and Hassell (Ld.)	..	Baltic Wharf, Bristol	1	0	0
†Maynard, Howard	..	Taunton	..	..	..
Meade-King, W. O. F.	..	Walford, Taunton	1	1	0
Meddick, William G.	..	37, New King Street, Bath	1	0	0
Membery, R.	..	37, Southgate Street, Bath	1	0	0
Merrifield, G. P.	..	Gunnabarn Farm, Summercourt, Cornwall	1	0	0
Merryweather & Sons, (Ld.)	..	Greenwich Road, London, S.E.10.	1	1	0
Merson, T. H.	..	Farringdon, N. Petherton, Bridgewater	1	0	0
Merry, R.	..	Goulds, Broadclyst, Exeter	0	10	0
*Methuen, Field Marshal Lord, C.B., C.M.G.	..	Corsham Court, Wilts	2	0	0
Methuen, Lady	..	Corsham Court, Wilts	1	0	0
*Mildmay of Flete, Lord, P.C., T.D.	..	Flete, Ivybridge, S. Devon	2	2	0
†Miles, Lieut.-Col. Sir Charles W., Bart.	..	The Manor House, Walton-in-Gordano, Clevedon	..	..	..
Miles, H.	..	Auctioneer, Farrington Gurney, Bristol	1	0	0
Millard, F. J.	..	Bridge Farm, Butleigh, Glastonbury	1	0	0
Miller-Mundy, Major G.	..	Red Rice, Andover, Hants	1	0	0
Milne Harrop, Capt. N.	..	Garthgynan, Ruthin, N. Wales	1	0	0
Minoprio, F. C.	..	Avening Court, Avening, Glos.	1	0	0
Mitchell, Major A. B.	..	Poulton Priory Farm, Cirencester	1	0	0
Mitchell, Major F. A.	..	Doughton House, Tetbury, Glos.	1	0	0
Mitchell, Capt. H. G.	..	Tiptoe Lodge, Hordle, Hants	1	0	0
Moody, G. W.	..	Stapleton, Martock, Somerset	1	0	0
†Moore, H. F.	..	Renee House, 48, Dulwich Road, Herne Hill, S.E. 24	..	..	..
†Moore-Stevens, J. R. C.	..	Bellenden, Exeter	..	..	..
Moore-Stevens, Col. R. A.	..	Bellenden, Exeter	1	0	0
Morcom, Mrs. F. I.	..	Clock House, Bromsgrove	1	0	0

# Subscriptions.

CXCVII

Name.	Residence.	Sub- scriptions.		
		£	s.	d.
†Morgan, Major L. H. G. . . . .	Woolcombe, Wellington, Somerset	1	0	0
Morgan, J. P. . . . .	Wall Hall, Aldenham, Watford . .	1	0	0
Morland, J. C. . . . .	The Orchard, Street, Somerset . .	1	0	0
*Morley, Earl of . . . . .	Saltram, Plympton, Devon . . . .	2	0	0
Morris, Sir R. A., Bart. . . . .	Sketty Park, Swansea . . . . .	1	0	0
Morris, Son & Peard. . . . .	Auctioneers, North Curry, Taunton	1	0	0
Morrison-Bell, Col. E. F. . . . .	The Close, Tetbury, Glos. . . . .	1	0	0
*†Morrison, Hugh . . . . .	Fonthill House, Tisbury, Wilts . .	..	..	..
Morrison, J. . . . .	Fonthill, Tisbury . . . . .	1	0	0
Morrison, Major J. A., D.S.O. . . .	Basildon Park, Goring, Reading . .	1	0	0
Mortimer, Major M. W. . . . .	Longleat Estate Office, Warminster	1	1	0
Moss, S. E. . . . .	St. Fabians Drive, Chelmsford . .	1	0	0
Mosselmans, A. W. . . . .	Clouds, East Knoyle, Wilts . . . .	1	0	0
Mountain, H. S. . . . .	Groombridge Place, Kent . . . . .	1	0	0
Muirhead, Major A. J., M.P. . . . .	Haseley Court, Oxford . . . . .	1	0	0
Muntz, Mrs. J. O. . . . .	Foxhams, Horrabridge, S. Devon . .	1	0	0
Murch, J. . . . .	Charlton Mackrell . . . . .	1	0	0
Murray Smith, Hon. Mrs. . . . .	Gumley Hall, Market Harborough	1	0	0
Napier, H. B. . . . .	Ashton Court Estate Office, Long Ashton, Bristol . . . . .	1	1	0
Napier, Mrs. H. B. . . . .	Long Ashton, Bristol . . . . .	1	0	0
Napier, Capt. W. E. . . . .	Upton House, Sandwich, Kent . . . .	1	0	0
Napier Miles, P. . . . .	Kingsweston House, Shirehampton, Bristol . . . . .	1	0	0
National Society for Epileptics	The Orchards, Chalfont St. Peter, Bucks . . . . .	1	0	0
Neal, W. H. . . . .	Walreddon, Farm, near Tavistock	1	1	0
Neaverson, H. . . . .	18, Long Causeway, Peterborough	1	0	0
Neeld, Sir A. D., Bart., C.B. . . . .	Grittleton, Chippenham . . . . .	1	0	0
Nelder, C. W. . . . .	Carnarvon Arms, Dulverton, Somerset . . . . .	0	10	0
Nestlé & Anglo Swiss Condensed Milk Co. . . . .	Chippenham . . . . .	1	0	0
†Neville, Lieut.-Commander Ralph, R.N. . . . .	Butleigh, Glastonbury . . . . .	..	..	..
†Neville-Grenville, Robert . . . . .	Butleigh Court, Glastonbury . . . .	..	..	..
New, H. G. . . . .	Craddock, Cullompton, Devon . . .	1	0	0
Newbery, A. S., . . . . .	Newenham House, Axminster, East Devon . . . . .	1	0	0
Newman, Sir R. H. S., Bart., D.L., M.P. . . . .	Mamhead Park, near Exeter . . . .	1	1	0
Newton, A. E. . . . .	Dipford House, Trull, Taunton . .	1	1	0
Newton, Chambers & Co. (Ld.) . . . .	Thorncliffe, near Sheffield . . . . .	1	1	0
Nicholetts, E. C. . . . .	The Lons, Bitton, Gloucestershire	1	0	0
Nichols, G. . . . .	6, Downside Road, Clifton, Bristol	1	0	0
Nicholson, R. F. . . . .	Woodcote, Whitechurch, Hants . .	1	0	0
Nicholson, Major H. B., D.S.O. . . .	Mappercombe Manor, Melpash, Dorset . . . . .	1	0	0

Name.	Residence.	Subscriptions.		
		£	s.	d.
Nickolls, A. W. . . . .	Lorna Doone Rustic Works, Barnstaple . . . . .	1	0	0
Nixon, W. . . . .	Great Pinley, Claverdon, Warwick . . . . .	1	1	0
Norman, Messrs C. . . . .	Moor Place Farm, Much Hadham, Herts . . . . .	1	0	0
Norman, Capt. R. F. H. . . . .	Bilsborough, Henfield, Sussex . . . . .	1	0	0
*Normanton, Earl of . . . . .	Somerley, Ringwood . . . . .	2	0	0
North Somerset Electric Supply Co. (Ld.) . . . . .	Bower Ashton, Ashton Gate, Bristol . . . . .	1	1	0
Northey, G., J.P. . . . .	Cheney Court, Box, Wilts . . . . .	1	0	0
Nurse, F. G. . . . .	Wick Farm, Coxley, Wells . . . . .	1	0	0
†O'Hagan, Lord . . . . .				
Oldershaw, Dr. J., C.B.E. . . . .	Peterhurst, Clevedon, Som. . . . .	1	0	0
Oldham, H. E. . . . .	Bennetts, Whitstone, Cornwall . . . . .	1	0	0
Onslow, Countess of . . . . .	Clandon Park, near Guildford . . . . .	1	0	0
*†Oppenheimer, Sir B., Bart. . . . .				
Osborne, A. H. W. & Sons . . . . .	Branch Farm, Mells, Frome . . . . .	1	0	0
Osmond & Son . . . . .	Grimsby . . . . .	1	0	0
Paddison, W. P. . . . .	Research Department, Royal Arsenal, Woolwich, London, S.E. 18 . . . . .	1	0	0
Paget, The Hon. Dorothy . . . . .	8, Balfour Place, Park Lane, London . . . . .	1	0	0
*Paget, Sir Richard, Bart. . . . .	1, Devonshire Terrace, Lancaster Gate, London, W.2 . . . . .	2	0	0
*Palmer, E. E. . . . .	Priors Court, Chieveley, Berks . . . . .	2	0	0
†Palmer, J. H. . . . .	Pinewood, Burnham-on-Sea, Somerset . . . . .			
Palmer, W. H. . . . .	York Buildings, Bridgwater . . . . .	1	0	0
Palmer, Mrs. W. Howard . . . . .	Heathlands, Wokingham, Berks . . . . .	1	0	0
Palmer, Lt.-Col. W. Llewellyn, M.C. . . . .	Rushmore Park, Salisbury . . . . .	1	0	0
Pape, Mrs. A. M. . . . .	Shrewton House, Wilts . . . . .	1	0	0
Parker, L. M. . . . .	14, Sketty Road, Swansea . . . . .	1	0	0
Parke, Miss M. M. . . . .	Lapal House, Quinton, Birmingham . . . . .	1	0	0
*Parry, J. E. . . . .	Talybryn, Bwlch, S.O., Breconshire . . . . .	2	2	0
Parsons, F. J. . . . .	School House Farm, Thorncombe, Chard . . . . .	1	0	0
Parsons, F. W. . . . .	Speckington, Ilchester . . . . .	1	0	0
Parsons, J. . . . .	The Lons, Nore Road, Portishead . . . . .	1	0	0
†Parsons, J. D. Toogood . . . . .				
Parsons, P. . . . .	Greenfield Farm, Portishead . . . . .	1	0	0
†Parsons, R. M. P. . . . .	Misterton, Crewkerne . . . . .			
Partridge, A. A. . . . .	Mordref, Plympton, Devon . . . . .	1	0	0
Pass, A. D. . . . .	Manor House, Wootton Fitzpaine, Charmouth, Dorset . . . . .	1	0	0
Patch, H. C. . . . .	Dial Farm, Barrow Gurney, Somerset . . . . .	1	0	0

# Subscriptions.

CXCIX

Name.	Residence.	Sub- scriptions.	£ s. d.		
			£	s.	d.
Pawlyn, J. H. W.	Messrs. Ransomes, Sims & Jefferies (Ld.), Orwell Works, Ipswich	1 0 0	1	0	0
Peace, A. H.	Creech St. Michael, near Taunton	1 0 0	1	0	0
Peacock, Sir W.	3, Buckingham Gate, London	1 1 0	1	1	0
Pearce, E.	51, Queen Charlotte Street, Bristol	1 0 0	1	0	0
Pearce, J. L.	51, Queen Charlotte Street, Bristol	1 0 0	1	0	0
Pearce, T. H.	Belle Vue, Long Ashton, Bristol	1 0 0	1	0	0
Pearcey, T. J.	Peadhill, Tiverton, Devon	1 0 0	1	0	0
Peck, Hon. Mrs.	Hazelwood, S. Devon	1 1 0	1	1	0
Pelly, H. C.	Venars, Nutfield, Surrey	1 0 0	1	0	0
*Pender, Major H. Denison, D.S.O.	Strangways, Marnhull, Dorset	2 0 0	2	0	0
†Penny, F. W.	Greenway House, Taunton	..	..	..	..
Pepper, W. F.	New Redlynch Farm, Bruton	1 0 0	1	0	0
Perkins, Col. Sir Edwin	31, Winn Road, Southampton	1 1 0	1	1	0
Petch, S.	Gainsborough House, Milborne Port	1 0 0	1	0	0
Petch, Mrs.	Gainsborough House, Milborne Port	1 0 0	1	0	0
Petherick, R., jun.	Acland Barton, Landkey, Barnstaple	0 10 0	0	10	0
Petters (Ld.)	Yeovil	1 0 0	1	0	0
Pettifer, S. and Son	Malmesbury	1 0 0	1	0	0
Pettifer, T. & Co. (Ld.)	Eydon, Banbury	1 0 0	1	0	0
Peyton, E. P.	Cattespole, near Bromsgrove	1 0 0	1	0	0
Phillips, Sir L. R.	..	1 1 0	1	1	0
Phipps, C. B. H.	Chaleot, Westbury, Wilts	1 0 0	1	0	0
Phipps, The Lady Sybil	Chaleot, Westbury, Wilts	1 0 0	1	0	0
Pierce, Miss S. M.	"Hillmarton," Four Oaks, Warwickshire	1 0 0	1	0	0
Piggott Brothers & Co., (Ld.)	220, 222, 224, Bishopsgate, London, E.C. 2	1 0 0	1	0	0
Pinkstone, C. G. (Pinkstone (Ld.))	Lower Park Row, Bristol	1 1 0	1	1	0
†Pinney, R. W. P.	Somerton, Somerset	..	..	..	..
Player, J. D.	Lenton Hurst, Nottingham	1 0 0	1	0	0
Plowman, J.	Westover, Spencer's Belle Vue, Bath	1 0 0	1	0	0
*Plymouth, Earl of	Hewell Grange, Bromsgrove	4 0 0	4	0	0
*Poltimore, Lord	Court Hall, North Molton, Devon	2 2 0	2	2	0
Poore, Capt. J.	Estate Office, Badminton, Glos.	1 1 0	1	1	0
Pope, Alfred, J.P.	South Court, Dorchester	1 0 0	1	0	0
Pope, John	Nowers, Wellington, Somerset	1 0 0	1	0	0
Popham, H. L.	Hunstrete House, Pensford, Bristol	1 0 0	1	0	0
Popham, Mrs. H. L.	Hunstrete House, Pensford, Bristol	1 0 0	1	0	0
Porter, W. J. H.	Glendale Farm, Wedmore	1 0 0	1	0	0
Powlett, A. T.	42 Milsom Street, Bath	1 0 0	1	0	0
Prescott, W. H.	Highlands, Woldingham, Surrey	1 1 0	1	1	0
†Price, Sir Francis, Bart.	The Down House, Redmarley, Gloucester	..	..	..	..
Prichard, H. L.	Penmaen, R.S.O., Glam.	1 0 0	1	0	0



Name.	Residence.	Sub- scriptions.		
		£	s.	d.
Pritchard, E. .. ..	Wood Hill Park, Wootton Bassett, Wilts .. .. .	1	0	0
Proctor, H. & T. (Ld.) ..	Cathay, Bristol .. .. .	1	1	0
Proudfoot, W. .. ..	Lynmouth, Keyberry Park, Newton Abbot .. .. .	1	0	0
Pullin, J. W. .. ..	Compton Greenfield, Bristol ..	1	0	0
Pyman, J. Sutcliffe .. ..	Norsebury, Sutton Scotney, Hants	1	0	0
Pyman, Mrs. J. Sutcliffe ..	Norsebury, Sutton Scotney, Hants.	1	0	0
Quantock Vale Cider Co. ..	North Petherton, Bridgwater ..	1	0	0
Quicke, Capt. N. A. .. ..	Newton House, Newton St. Cyres, Devon .. .. .	1	0	0
Rackley, J. & Sons .. ..	Hermitage Farm, Silver Street, Edmonton, London, N.18 .. ..	1	0	0
*†Radnor, Earl of .. ..	Longford Castle, Salisbury .. ..	..	..	..
Rank, J. V. .. ..	Ouborough, Godstone, Surrey ..	1	0	0
Rawlence, Ernest A. .. ..	St. Andrew's, Salisbury .. ..	1	0	0
Rawlence, G. Norman .. ..	Salisbury .. .. .	1	0	0
†Rawlence, Major M., D.S.O., R.E. . . . .	c/o Lloyd's Bank, Cox's Branch, 16, Charing Cross, London, S.W.1 ..	..	..	..
Rea, F. H. .. ..	Kite's Nest Farm, near Wotton- under-Edge, Glos. .. ..	1	0	0
Readhead, R. .. ..	Great House, Hambledon, Godalming	1	0	0
Reakes, H. F. .. ..	Batch Farm, Kilmersdon, Radstock	1	0	0
Reed, P. J. .. ..	Bineham, Long Sutton, Langport	1	0	0
Reed, R. E. .. ..	Bineham, Long Sutton, Langport	1	0	0
Rees, A. & Sons .. ..	Whiteway Works, Cirencester ..	1	0	0
Rees-Mogg, Mrs. Graham ..	Clifford Manor, nr. Stratford-on- Avon .. .. .	1	0	0
Reeves, R. M. F. .. ..	Combe House, Backwell, Somerset	1	0	0
Reeves, Robert & John & Son	Bratton Iron Works, Westbury, Wilts .. .. .	1	0	0
Reliance Anthracite Ovoids (Ld.) .. ..	6, Bathurst Street, Paddington, London, W.2 .. .. .	1	0	0
Remnant, Lord .. ..	Bear Place, Twyford, Berks .. ..	1	0	0
Rendell, A. J. .. ..	Stall Street, Bath .. .. .	1	0	0
Rennie, J. H. .. ..	Porthycarne, Usk, Mon. .. ..	1	0	0
Reynolds, Sylvanus .. ..	.. .. .	1	0	0
Rich, S. L. .. ..	Chapel Farm, Faulkland, Bath ..	1	0	0
Ricks, Mrs. O. W. .. ..	Hatch Farm House, Addlestone, Surrey .. .. .	1	0	0
*Ridley, Col. H. M. .. ..	Maperton, Wincanton .. .. .	2	0	0
Roach, W. .. ..	Trewidden, Buryas Bridge, Cornwall	1	0	0
Roberts, C. M. .. ..	5, Edward Street, Bath .. ..	1	0	0
Roberts, Gerald .. ..	St. Crispins, Sherborne, Dorset ..	1	1	0
Roberts, K., M.I.M.E. (J. Coultas, Ld.) .. ..	Normandine, Belton Lane, Grantham	1	0	0

# Subscriptions.

cc1

Name	Residence	Sub- scriptions		
		£	s.	d.
Robins, O. T. & A. F.	Lidcott Hall, High Bray, South Molton	1	0	0
Robinson, E. S. & A. (Ld.)	Redcliffe Street, Bristol	1	1	0
Robinson, John & Co.	Bristol	1	1	0
Robinson, Lt.-Col. P. G.	The Manor, Queen Charlton, nr. Bristol	1	0	0
*Robinson, T.	West Town, near Bristol	2	0	0
Robinson, Foster G.	Goldney House, Clifton, Bristol	1	0	0
Roche, Capt. J. W.	Donyatt, Ilminster	1	0	0
Rogerson, R. W.	Northgate Street, Bath	1	0	0
Rolleston, S. V.	15, Brock Street, Bath	1	0	0
Roper, Geoffrey D.	Farde Abbey, Chard	1	0	0
†Rose E. H.	Leweston Manor, Sherborne, Dorset	..	..	..
Rothwell, Major	Morebath, N. Devon	1	1	0
Roundway, Col. Lord, C.M.G., D.S.O., M.V.O.,	Roundway Park, Devizes	1	0	0
Roundway, Lady	Roundway Park, Devizes	1	1	0
Rouse-Boughton, Sir W. St. A., Bart.	Downton Hall, Ludlow	1	0	0
Rouse-Boughton, Lady	Downton Hall, Ludlow	1	0	0
Rowcliffe, E. L.	Stovolds Hill, Cranleigh, Surrey	1	1	0
Rowcliffe, H. S.	Knowle Lodge, Langton Green, Tunbridge Wells	1	0	0
Rowland, P. S.	Fairy Hill, Reynoldston, Gower, Glam.	1	0	0
Royal Guernsey Agricultural and Horticultural Society	Guernsey	1	0	0
*†Rubin, Bernard	..	..	..	..
Russell, G.	North Hill Farm, Dundry, near Bristol	1	0	0
Ruston & Hornsby (Ld.)	Grantham	1	0	0
Ryman, W. W.	Wall, Lichfield, Staffs.	1	1	0
†St. Audries, Lord	St. Audries, Bridgwater	..	..	..
St. John, Col. the Hon. Roland	Langford Budville, Wellington, Somerset	1	0	0
St. John of Bletsoe, Lord	Melchbourne Park, Beds.	1	0	0
Salopian Cattle Bowl Co.	Prees, Whitechurch, Salop	1	0	0
Salter, T.	Beare Farm, Broadclvst, Exeter	1	0	0
Scotney, T. M.	West End Mills, St. Ives, Hunts	1	0	0
Scott, A. B.	The Batch, Flax Bourton	1	0	0
Scott, Geo.	Frome Cliff, Stapleton, Bristol	1	0	0
Scrutton, A.	Woodleigh, Bradford-on-Avon, Wilts	1	0	0
Scrutton, Mrs. A.	Woodleigh, Bradford-on-Avon, Wilts	1	0	0
†Seaton, Lord	Buckland Abbey, Yelverton, Devon	..	..	..
Shaw, Mrs. D. E.	Steyning Manor, Stogursey, Bridgwater	1	1	0
Shaw, Col. F. S. Kennedy, C.B.E.	Teffont Magna, Salisbury	1	1	0

Name	Residence	Sub- scriptions		
		£ s. d.		
Shaw, W. B. K. .. ..	Teffont Magna, Salisbury .. ..	1	0	0
†Shaw-Stewart, Walter R. ..	Fonthill Abbey, Tisbury, Wilts ..	..	..	..
Sheldon, R. F. .. ..	West Street House, Wells .. ..	1	0	0
*Shelley, Sir John, Bart. ..	Shobrooke Park, Crediton .. ..	2	2	0
*Shelley, Major J. F. .. ..	Posbury House, Crediton .. ..	2	2	0
Shelley, Mrs. J. F. .. ..	Posbury House, Crediton .. ..	1	0	0
Sheppard, P. C. O. .. ..	Dunraven Estate Office, Bridgend, Glam. .. ..	1	1	0
Sherriff & Sons .. ..	Lemsford, Hatfield .. ..	1	0	0
†Sherston, C. J. T. .. ..	The Quarry, Amberley, Sussex ..	..	..	..
†Sherston, T. P. D. .. ..	Estate Office, Templecombe, Somerset .. ..	..	..	..
*Sidmouth, Viscount .. ..	Up Ottery Manor, Honiton .. ..	2	0	0
Silcock, R. & Sons .. ..	Stanley Hall, Union Street, Liver- pool .. ..	1	1	0
Simmons Hodge, Miss R. ..	Belmont, Devoran, Cornwall ..	1	0	0
Simonds, J. Barrow .. ..	Abbots Barton, Winchester ..	1	0	0
Sinclair, R. J. .. ..	Cleeve Court, near Bristol ..	1	0	0
*Singer, W. M. G. ... ..	42, Charles Street, Berkeley Square, London, W.1. .. ..	2	0	0
Skidmore, Miss E. .. ..	Ashley Leigh, Box, Wilts .. ..	1	0	0
Skinner, Board & Co. .. ..	Exmoor Street, Bedminster, Bristol	1	0	0
Skinner, G. C. .. ..	Pound, Bishops Lydeard .. ..	1	1	0
Skrine, Miss A. D. M. .. ..	Warleigh Manor, Bath .. ..	1	0	0
Slatter, J. R. ... ..	.. ..	1	0	0
Smart, G. E. ... ..	Combe Hay Manor, Bath .. ..	1	1	0
Smith, A. Carlyle .. ..	Sutton Hall, Woodbridge, Suffolk	1	0	0
Smith, A. J. (Ld.) .. ..	9, Queen's Square, Bristol ..	1	0	0
Smith, D. .. ..	Court Farm, Stoke Gifford, near Bristol .. ..	1	0	0
Smith, E. A. .. ..	Longhills, Lincoln .. ..	1	0	0
Smith, W. G. Verdon .. ..	Hill House, Long Ashton, Bristol..	1	0	0
Smith-Barry, Mrs. K. .. ..	c/o H. I. Richmond, Lloyds Bank Chambers, Wrexham .. ..	1	1	0
Smyth, Hon. G. N. ... ..	Ashton Court, Bristol .. ..	1	0	0
Smyth, Hon. Mrs. .. ..	Ashton Court, Bristol .. ..	1	0	0
Somerset, Duke of .. ..	Maiden Bradley, Bath .. ..	1	0	0
Somerset Farm Institute ..	Cannington, near Bridgwater ..	1	0	0
Somerset Trading Co. (Ld.) ..	Bridgwater .. ..	1	1	0
†Somerville, A. F. .. ..	Dinder House, Wells, Somerset ..	..	..	..
Southwell, G. R. .. ..	Holbury Farm, Lockerley, Romsey	1	0	0
Southwood, J. W. C. .. ..	1, St. Peter's Terrace, Twerton, Bath .. ..	1	0	0
Sowerby, T. M. .. ..	Backwell Down, Flax Bourton, Som	1	0	0
Spear Brothers & Clark (Ld.)	Southgate Street, Bath .. ..	1	0	0
Speke, Capt. C. .. ..	Horton Cross, Ilminster, Somerset	1	0	0
Spencer, Lieut.-Col. H. G. ..	Southill House, West Cranmore, Somerset .. ..	1	0	0
Spencer Follett, Lt.-Col. ..	Rockbeare Manor, Devon .. ..	1	0	0
Spicer, Lady M. .. ..	Spye Park, Chippenham .. ..	1	0	0

# Subscriptions.

cciii

Name.	Residence.	Sub- scriptions.		
		£	s.	d.
Spillers (Ld.) .. ..	Redcliffe Back, Bristol .. ..	1	1	0
Staines, Mrs. .. ..	Hook Farm, Leigh, Surrey .. ..	1	0	0
*†Stanley, E. A. V. .. ..	Tixover Grange, Duddington, Stam- ford .. ..	..	..	..
Stanley, Col. the Hon. A., D.S.O. .. ..	Sopworth, Chippenham, Wilts .. ..	1	0	0
Staveley, Mrs. M. C. .. ..	Sturford, Walton by Clevedon .. ..	1	0	0
Stephenson and Alexander .. ..	Auctioneers, Cardiff .. ..	1	1	0
†Stern, Sir Edward, D. L. .. ..	Fan Court, Chertsey .. ..	..	..	..
Stevenson, J. K. H. .. ..	The Chase, Upper Welland, Mal- vern Wells .. ..	1	0	0
Stewart Richardson, Major R. M. .. ..	Idover House, Dauntsey, Chippen- ham, Wilts .. ..	1	0	0
Stibbard, Lt.-Col. H. J., O.B.E. .. ..	Chiseldon Camp, Wilts .. ..	1	0	0
Stilgoe, H. W. .. ..	The Grounds, Adderbury, near Banbury, Oxon .. ..	1	0	0
Storey, H. L. .. ..	The Manor House, Malmesbury .. ..	1	0	0
Storr, Miss I. .. ..	40, Mecklenburgh Square, London .. ..	1	1	0
Storror, J. I. .. ..	Tredegar Estate Office, Newport, Mon. .. ..	1	0	0
Stott, F. J. .. ..	The Hermitage, Ridgeway, near Frome .. ..	1	0	0
†Strachie, Lord .. ..	Sutton Court, Pensford, Somerset .. ..	..	..	..
†Strachev, Lt.-Col. the Hon. E. .. ..	Sutton Court, Pensford, Somerset .. ..	..	..	..
Strafford, Earl of .. ..	Dancers Hill, Barnet .. ..	1	0	0
Strangways, Miss S. .. ..	Shapwick Bridgwater .. ..	1	0	0
Stratton, B. K. (Messrs. Spillers) .. ..	Uveco Cereals, Cunard Building, Liverpool .. ..	1	0	0
Stratton, Richard .. ..	The Duffryn, Newport Mon. .. ..	1	0	0
Strauss, E. A. .. ..	Estate Office, Kingston Bagpuize, Abingdon, Berks. .. ..	1	0	0
Strode, G. S. S. .. ..	Newnham Park, Plympton .. ..	1	0	0
Stucley, H. V. G. .. ..	Pillhead, Bideford, North Devon .. ..	1	0	0
Studdy, R. F. B. .. ..	Estate Office, Wotton, Dorking .. ..	1	0	0
*Sutton, E. P. F., M.B.E. .. ..	Erleigh Park, near Reading .. ..	2	2	0
*Sutton and Sons .. ..	Seedsmen, Reading .. ..	2	2	0
Swanton, F. .. ..	Overton, Marlborough .. ..	1	0	0
Swansea, Lord, D.S.O., M.V.O. .. ..	Caer Beris, Builth, Breconshire .. ..	1	0	0
Swanwick, Bruce .. ..	The Road House, Rodborough Common, near Stroud .. ..	1	0	0
Swayne, Mrs. G. .. ..	Abbeywood, Burnham-on-Sea, Somerset .. ..	1	1	0
*Swayne, P. C. .. ..	Castle Hill House, Nether Stowey .. ..	2	2	0
Sweet, Rev. C. L. .. ..	Symondsburv Rectory, Bridport .. ..	1	0	0
Sykes, E. .. ..	Richings Park, Colnbrook, Bucks .. ..	1	0	0
Symons, J. & Co. (Ld.) .. ..	The Plains, Totnes .. ..	1	1	0
Tangyes (Ld.) .. ..	Cornwall Works, Birmingham .. ..	1	0	0
Tavener, G. E. .. ..	Budlake, Devon .. ..	1	0	0

Name.	Residence.	Subscriptions.		
		£	s.	d.
†Taylor, Cortlandt .. ..	Platt House Farm, Wrotham Hill, Kent .. .. .	..	..	..
Taylor, E. .. ..	The Old Red House, New Bond Street, Bath .. .. .	1	1	0
Taylor, E. J... ..	.. .. .	1	0	0
Taylor, L. Acland .. ..	City Librarian, Central Library, Bristol .. .. .	1	0	0
Taylor, R. B. .. ..	Hendford Lodge, Yeovil .. .. .	1	0	0
†Tazewell, W. H. .. ..	Manor House, Taunton .. .. .	..	..	..
*†Temple, Earl .. ..	Newton St. Loe, Bristol .. .. .	..	..	..
Terry, F. N. .. ..	Chebhard, Dorchester .. .. .	1	0	0
*Thackray, R. .. ..	Fords Farm, Calcot, nr. Reading ..	2	0	0
Thomas-Stanford, Sir Charles, Bt... ..	Preston Manor, Brighton .. .. .	1	0	0
Thomas, Sir Ilttyd .. ..	The Mead, Llandaff, Cardiff ..	1	0	0
Thomas, J. .. ..	Velindre, Kidwelly, Carmarthen-shire .. .. .	1	1	0
Thomas, J. C. H. .. ..	Bartridge, Umlerleigh, Devon ..	1	0	0
Thomas, W. J. .. ..	Treskerby, Redruth, Cornwall ..	1	0	0
Thomas, W. J. .. ..	Prospect House, Landkey, Barnstaple .. .. .	1	0	0
Thomas & Evans & John Dyer (Ld.) .. ..	Swansea .. .. .	1	0	0
Thompson, Major G. Malcolm	Manor House, Kington St. Michael, Chippenham .. .. .	1	0	0
*Thompson, Major C. ..	The Friary, Kings Bromley, Burton-on-Trent .. .. .	2	2	0
Thompson, V. T. .. ..	Norton Manor, Sutton Scotney, Hants .. .. .	1	0	0
Thresher, E. B. .. ..	Corfe Hill, Weymouth .. .. .	1	0	0
Thring, Sir Arthur T. ..	Charlton House, Charlton Mackrell	1	0	0
Thurlow, G. R. .. ..	Stowmarket .. .. .	1	0	0
†Tiarks, H. A. .. ..	Webbington House, Axbridge, Som. ..	..	..	..
Tilley, G. Ford .. ..	Alstone Court, Huntspill, Bridgwater	1	1	0
Tipper, B. C. and Son ..	Balsall Heath, Birmingham ..	1	0	0
Titt, J. W. .. ..	Implement Works, Warminster ..	1	0	0
Toogood, E. K. .. ..	Messrs. Toogood & Sons, Southampton .. .. .	1	0	0
Tory, C. E. .. ..	Higher Burton House, Dorchester	1	0	0
Tory, Mrs. P. .. ..	Shapwick, Blandford, Dorset ..	1	0	0
Tory, P. C. .. ..	Shapwick, Blandford, Dorset ..	1	0	0
Tory, R. .. ..	Charisworth Manor, Blandford, Dorset .. .. .	1	0	0
Tory, R. N. .. ..	Anderson, Blandford, Dorset ..	1	0	0
Tory, W. R. .. ..	Clenstone Manor, Blandford, Dorset	1	0	0
Townend, F. .. ..	Highfield, Moor Allerton, Leeds ..	1	0	0
Trafford, G. R. .. ..	Hill Court, Ross, Herefordshire ..	1	1	0
*Tredegar, Viscount ..	Tredegar Park, Newport, Mon. ..	2	2	0
Tregoning, Capt. G. N. ..	Bevill's Hill, Bridgerule, near Hols-worthy, N. Cornwall .. ..	1	0	0

# Subscriptions.

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Total 1138

## INDEX.

- ACCOUNT BOOKS FOR FARMERS, 135  
 Agricultural Chemistry (Advisory), 136  
     Diploma Courses, 60  
     Economics, 138  
     Education at Torquay, Cudall and Hobhouse on, 110  
     Notes on Buenos Aires, J. H. Norton on, 7  
     Pests in Bristol Province, 174  
 Alfalfa in the Argentine, 12  
 Analyses of Cider at Torquay, 120  
 ——— Members' Privileges, cxix  
 Analysis of Sugar Beet Tops, 28  
 Annual Exhibitions, List of, cxvi  
 ——— Report of Consulting Chemist, 126  
 ——— ——— on Society's Operations, 121  
 Apple and Pear Scab, R. W. Marsh on, 143  
 Argentine, Agricultural Notes on, 7  
 ——— Fauna, 14  
 Arsenate of Lead for Beet Carrion Beetle, 176  
 Asparagus Diseases, 154
- BACON PIG CLASSES AT TORQUAY, 94  
 Barb Pony Stock in Argentine, 8  
 Barker, B. T. P., on National Fruit and Cider Institute, 128  
 Beet Carrion Beetle, 174  
 Berkeley Square Advisory Centre, 129  
 Best, Hon. J. W., on Forestry at Torquay, 115  
 Bracken Eradication Experiments, 70  
 Bristol Meeting, Prize List, cxxv  
 Bryan, J., on Open Tank Process for Timber, 65  
 Building and Sporting Rights, 19  
 Butter Tests at Torquay, 106
- CAMPDEN RESEARCH STATION, 128  
 Canning of Fruit and Vegetables, 129  
 Cider at Torquay Show, Farwell E. W. on, 118  
 ——— Bittersweet Varieties, 185  
 ——— Making Trials, O. Grove on, 183  
 Clean Milk Competitions, 139  
 Clydesdale Stock in Argentine, 9  
 Committees, Standing, 4  
 Competitions at Torquay, 97  
 Copper Sulphate for Potato Sickness, 170  
 Council of the Society, Members of, 2  
 Cricket Bat Timber, Hutchinson on, 200  
 Cudall, H. M., on Agricultural Education at Torquay, 110
- DAIRY DEPARTMENT AT TORQUAY, A. F. SOMERVILLE ON, 99  
 Dry Root Rot of Beans, 155  
 Duchy Estate Forestry, 115  
 Dwarf Bean Diseases, 154
- EDWARDES-KER, D. R., ON SEALE HAYNE COLLEGE, 59  
 Entries of Live Stock at Torquay, 95
- FARWELL, E. W., ON CIDER AT TORQUAY SHOW, 118  
 Feeding of Stock on Beet Tops, 34-37  
 ——— Beet Pulp, 42  
 Financial Statement, 1930, cxlii  
 Forestry at Torquay Show, Best, J. W., on, 115  
 ——— at Torquay, Awards, cix  
 Forest Working Plans, 116  
 Formalin for Potato Sickness, 170

Foot Rot of Peas, 162

Fruit Products Research, 129

#### GENERAL LAWS, SOCIETY'S, cxiii

Goat Milking Tests at Torquay, 108

Grassland Improvement, 110

Ground Game and Sporting Rights, 21

Grove, O., on Cider Making Trials, 183

HALO BLIGHT ON DWARF BEANS, 156

Hobhouse, A. L., on Agricultural Education at Torquay, 110

Horse Classes at Torquay, 93

Horticultural Pests, Bristol Province, 174

Hunting Gates at Torquay, 117

Hutchinson, H. P., on Cricket Bat Timber, 200

#### JUNKET MAKING AT TORQUAY, 99

LEEK DISEASES, 158

Lettuce Diseases, 160

Lime and the Eradication of Bracken, 89

Ling, A. W., on Bracken Eradication, 70

Lobster Pot Competition, 117

Locusts in Argentine, 16

Long Ashton Bracken Plot, 75

— Research Station, 130

Lydney Bracken Plot, 82

MARSH, R. W., ON APPLE AND PEAR SCAB, 143

Members, List of Society's, clxxviii

Mennonites in Argentine, 11

Merino Sheep in Argentine, 10

Meston, Hon. D., on Sporting Rights, 17

Milk Tests at Torquay, 104

Mint Rust, 162

Molasses Beet Pulp, 44

Moles, Destruction of, 137

Mosaic Diseases on Marrows, 171

Mulligan, B. O., on Vegetable Diseases, 154

"NANDUBAY" WOOD, 8

National Fruit and Cider Institute, 128

— Mark Exhibit at Torquay, 114

Norton, Major J. H., on Southern District of Buenos Aires, 7

#### OFFICERS OF SOCIETY, LIST OF, 1

Ogilvie, L., on Vegetable Diseases, 154

Open Tank Process for Timber J. Bryan on, 65

Oxalic Acid in Beet Tops, 29

PEAR SCAB, R. W. MARSH ON, 143

Peas, Foot Rot in, 162

Pencombe Bracken Plot, 84

Phosphates on Bracken Areas, 89

P'g Feed, Sugar Beet Pulp for, 54

Potato Diseases, 168

#### RATING OF SPORTING RIGHTS, 23

Road Making and Sporting Rights, 19

Rural Education and Handicrafts, 113

Rural Industries Bureau, Work of, 96

SANFOIN MIDGE, 177

Scale-Hayne Agricultural College, 59

— College Farm, 62

Sheep Crosses in Argentine, 10

Shorthorn Stock in Argentine, 9

"Sickness" in Potatoes, 168

Silage from Beet Pulp, 43

— from Beet Tops, 37

Somerville, A. F., on Dairy at Torquay, 99

Soot for Control of Beet Carrion Beetle, 176

Sporting Rights, D. Meston on, 17

— (Damage to Crops), 20

Spray Guns, Advantages of, 151

Spraying Against Apple and Pear Scab, 144

Staniland, L. N., on Agricultural and Horticultural Pests, 174

Storr, F. H., on Annual Report, 121

—, on Torquay Exhibition, 92

- |  |  |
|--|--|
| <p>Sugar Beet Crop, Thompson, J. K., on, 24</p> <p>—— ——— Tops for Feeding, 27</p> <p>Sugar Beet Pulp, 42</p> <p>—— ——— for Pigs, 54</p> <p>"Symphyla" as Tomato Pest, 179</p><br><p>TAR OIL WASH AGAINST WOOLLY APHIS, 182</p> <p>Thompson, J. K., on By-Products of Sugar Beet, 24</p> <p>Timber, Absorption of Creosote, 65</p> <p>——, Sales and Sporting Rights, 18</p> <p>——, Treatment Before Creosoting, 69</p> <p>Tomato Pest (<i>Scutigerella Immaculata</i>) 178</p> <p>Torquay Exhibition, F. H. Storr on, 92</p> <p>—— Meeting, Cattle Awards, xix</p> <p>—— ———, Competitions Awards, lxxx'i</p> <p>—— ———, Financial Statement, clxxvii</p> <p>—— ———, Goat Awards, lvi</p> <p>—— ———, Horse Awards, iv</p> <p>—— ———, Judges, i</p> | <p>Torquay Meeting, Pig Awards, lix</p> <p>—— ———, Poultry Awards, lxxxix</p> <p>—— ———, Produce Awards, lxxvi</p> <p>—— ———, Sheep Awards, xlix</p><br><p>VEGETABLE DISEASES, OGILVIE AND MULLIGAN ON, 154</p> <p>Vegetable Marrow Diseases, 171</p> <p>Voelcker, J. A., Report of Consulting Chemist, 126</p><br><p>WALLACE, T., ON BRACKEN ERADICATION, 70</p> <p>Walton, C. L., on Agricultural and Horticultural Pests, 174</p> <p>Warble Fly Eradication, 123</p> <p>Willows for Cricket Bats, 200</p> <p>Winter Sprays, 141</p> <p>Wool Marketing, 111</p> <p>Woolly Aphis, Control of, 181</p> <p>Wootton Fitzpaine Plot, 81</p> |
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END OF VOLUME V.

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#### Jerseys.

THORNYCROFT, LADY, STEYNE, BEMBRIDGE, I. OF WIGHT. Old-established herd; carefully bred and hardily reared. Rothschild (Oxford), Watney, Padwick, Bruce-Ward, and best Island strains. Daily milk records since 1894; official since 1924. Almost every home-bred animal entered for R. of Merit has qualified A, B, or Extended, including Carol, class leader, senior two-year-olds, for both milk and butter fat (558.11 lbs. fat) in 1925.

#### Kerry.

PALMER, CAPTAIN RICHARD ELLIOTT. The O.P.H. (Registered prefix), Oaklands Park Herd, Newdigate, Surrey. Pure Pedigree, Registered Kerry Cattle, prize-milking, butter fat, record strains, type breeding. The champion economic milk producer of the World.—Apply The Foreman.

#### Lincoln Red Shorthorns.

STAPLEFORD PARK HERD OF LINCOLN RED MILKING SHORTHORNS. A few young Bulls for sale, from tested milkers.—Apply C. S. Harvey, Wymondham, Oakham.

#### Sussex.

HURTLEY, EDWARD, CROWBOROUGH WARREN, SUSSEX. Breeder of Sussex Cattle. Station: Crowborough, L.B. and S.C. Ry.

## BREEDERS' DIRECTORY.

### **CATTLE**—*continued*

#### **Shorthorns.**

DUTHIE-WEBSTER, COLLYNIE, TARVES, ABERDEENSHIRE. Seventeen miles from Aberdeen. Telegrams and Telephone: Duthie, Tarves. Annual Sale of Bull and Heifer Calves second Tuesday, October.

RAYNAR, J. P., BILTON HALL, YORK. Long Pedigree Scotch Shorthorns. Four Champions recent York Sales also 2nd prize Heifer, York Fat Stock Show. 1929. All bred in the Herd. Stock Bull: Aikbank Royal Star 227579, winner 6 Firsts, 2 Champions. 5 Reserve Champions, only times shown.

### **SHEEP.**

#### **Hampshire Downs.**

BURNHAM HAMPSHIRE DOWNS. Owner, E. CLIFTON-BROWN, Esq. Winners of Supreme Championship, Short-woolled Championship, and Breed Championship, Smithfield; 2 Firsts and Reserve Championship, R.A.S.E. Show, etc., 1930.—Apply Twist, Burnham Grove Estate Office, Burnham, Bucks.

#### **Oxford Downs.**

FULLER, MAJOR ROBERT, GREAT CHALFIELD, MELKSHAM. Flock Number 385, Oxford Down Sheep. Prizes 1930, Bath and West and Royal Shows. Enquiries invited.

### **SHEEP**—*continued*

#### **Oxford Downs.**

KELMSCOTT FLOCK OF OXFORD DOWN SHEEP. Established 1868. Rams sold annually at Oxford, Kelso and Northampton Ram Sales. Robert Hobbs, Kelmscott, Lechlade, Glos. Phone: Lechlade, 20.

#### **Shropshires.**

BIBBY, MRS. BRIAN, HARDWICKE GRANGE, SHREWSBURY. Shropshire Sheep of choicest merit from celebrated prize-winning flock for sale and export. Also Berkshire Pigs.—Apply Manager, Home Farm, Hardwicke, Shrewsbury.

#### **Southdowns.**

GATTON PARK SOUTHDOWN FLOCK (F.B. No. 136). Owner: Sir JEREMIAH COLMAN, Bt. Consistent winners all principal Shows for many years. Choice selection Rams and Lambs always for sale.—Apply Estate Office, Gatton Park, Surrey.

LANGMEAD, WALTER, WICKS FARM, YAPTON, ARUNDEL, SUSSEX. The breed holding world's records as pure and for crossing both alive and in Carcase Competitions. Phone: 29 Middleton. Station: Ford Junction Southern Railway.

LUTON HOO SOUTHDOWN FLOCK (95), property of LADY LUDLOW. Established 1870. 1929: Gold Medals Royal, Royal Counties and Sussex Shows; Northumberland Cup; Silver Medal for Ewes at Royal Show.—W. J. Fleet, Estate Office, Luton Hoo, Luton.



# BREEDERS' DIRECTORY.

## **SHEEP** *continued.*

### **Suffolk.**

**SOUTHBURN FLOCK OF SUFFOLK SHEEP,** FLOCK No. A. 7, property of Sir PRINCE PRINCE-SMITH, Bt. Prizes won at Royal, and other leading Shows. Ram Lambs for sale annually. Particulars, J. H. Brigg, Southburn Estate Office, Driffield, East Yorks.

### **Wiltshire Horns.**

**McTURK, ALEXANDER, BLASTON, MARKET HARBOROUGH.** Breeder of Wiltshire Horns. The ideal Cross for Early Fat Lamb on any breed of ewe. Rams for sale in August and September.

## **PIGS.**

### **Berkshires.**

**LANGBOURNE HERD OF PEDIGREE BERKSHIRE PIGS.** Fine selection of healthy young stock for disposal.—Apply to Owner, R. V. Garton. Langbourne, Blandford, Dorset.

**THE SYERSTON HERD OF PRIZE-WINNING PEDIGREE BERKSHIRE PIGS** Boars and G.lts for sale. Inspection invited by appointment.—Apply Owner, George Fillingham, Syerston, Newark, Notts.

**THICKET PRIORY HERD,** the property of Lt.-Col. J. A. DUNNINGTON-JEFFERSON, D.S.O. High-class Young Boars and G.lts on Sale, all of the celebrated Lunn family.—Apply to Andrew Moscrop, Thorganby Hall, York.

## **PIGS** *continued.*

### **Large Blacks.**

**LITTLE, MISS, ARMSWORTH HILL, ALRESFORD, HANTS.** Armsworth Herd Large Blacks. Winner Herd Cup Competition, 1930. Prolific hardy Boars and G.lts for sale.

### **Large Whites.**

**HURSLEY PARK FARM,** the property of Sir G. A. COOPER, Bt. Large white Pigs. Progeny records kept. Boars and G.lts of best strains only. At reasonable prices.—Apply T. W. Ashton, Estate Office, Hursley Park, Winchester. Telegrams: Hursley. Telephone: Hursley 10.

**STILTON HERD LARGE WHITE PIGS.** Grand selection of Pedigree Boars and G.lts always in stock.—John James Wilkins, Stilton, Peterborough.

### **Long White Lop-Eared.**

**SUSSEX HERD.** Owner: ARCHIBALD HART, HEATHFIELD TOWER, E. SUSSEX (close to Heathfield Station). Hardy Pedigree Pigs, woodland bred (outdoors), 600 feet above sea. Numerous awards. Prices moderate.

### **Middle Whites.**

**COOLING HERD OF PEDIGREE MIDDLE WHITE PIGS,** for quality, length and prolificacy. The property of Mr. FRANKLIN BATCHELOR. 12 Awards awarded to 7 Exhibits, at Kent County and Tunbridge Wells Agricultural Shows, 1930, including Silver Medal for Champion Boar. The only 2 Shows attended. Enquiries and Inspection invited.—Apply Oliver, Cooling Court, Cooling, Rochester, Kent. Telephone: Cliffe 33.

